

President's Advisory Committee on the Environment, Climate Change and Sustainability

2023 CECCS Annual Report
November 2023



UNIVERSITY OF
TORONTO



Acknowledgments

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Cover image:

General views of the Valley Land Trail at the University of Toronto Scarborough campus (July 26, 2023). Photo by Matthew Dochstader/Paradox Images.

Carousel images from the 2023 Annual Report web highlights:

Students at University College Landmark Green. Photo by Kristy Bard.

U of T Scarborough Sustainability staff Nadine Leone during Orientation Week. Photo by Kristy Bard.

UTSC Library from above. Photo by Matthew Dochstader / Paradox Images.

St. George Campus solar installation from above. Photo by David Lee.

Environmental Science program students on field trip to Highland Creek. Photo by Ken Jones.

Todd Smith and Gurmel Multani, Chief Operating Engineer and Manager Central Power Plant. Photo by David Lee.

Delegates outside COP27 in Sharm El Sheik. Photo by Paul Ellis/Getty.

[See highlights of the 2023 Annual Report online.](#)

CECCS Members

- **John Robinson**, Presidential Advisor; School of the Environment and Munk School of Global Affairs, Faculty of Arts and Science (Co-Chair)
- **Ron Saporta**, Acting Vice-President Operations (to Nov. 30, 2023) Chief Operating Officer, Property and Sustainability (Co-Chair)
- **Andrew Arifuzzaman**, Chief Administrative Officer, UTSC (Staff)
- **Deborah Brown**, Chief Administrative Officer, UTM (Staff)
- **Christine Burke**, Assistant Vice-President, University Planning, Operations and Real Estate Partnerships (Staff)
- **Chris Choi**, Environmental Science and Environmental Studies, UTSC (Undergraduate Student)
- **Tenley Conway**, Professor, Department of Geography, Geomatics and Environment, UTM (Faculty)
- **Kenneth Corts**, Professor and Vice-Dean, Research, Strategy, and Resources, Marcel Desautels Chair in Entrepreneurship, Rotman School of Management (Faculty)
- **Marc Couture**, Director, Sustainability and Energy Management, Facilities and Services, Operations and Real Estate Partnerships (Staff)

- **Lisa DeMarco**, Senior Partner and CEO, Resilient LLP (Alumna)
- **Steve Easterbrook**, Professor and Director, School of the Environment, Faculty of Arts and Science (Faculty)
- **Amanda Harvey-Sánchez**, PhD Candidate, Anthropology (Graduate Student)
- **Hilary Inwood**, Lecturer, Ontario Institute for Studies in Education (Faculty)
- **Nicole Klenk**, Associate Professor, Department of Physics and Environmental Science, UTSC (Faculty)
- **Daniella Mallinick**, Academic Programs, Planning & Quality Assurance, Office of the Vice-Provost, Academic Programs (to Oct. 2023), Assistant Dean, Office of the Vice-Principal, Academic and Dean, UTM, (from Nov. 2023) (Staff)
- **Jan Mahrt-Smith**, Associate Professor and Academic Director, Global Executive MBA, Rotman School of Management (Faculty)
- **Liat Margolis**, Associate Professor and Director, Green Roof Innovation Testing Laboratory, Faculty of Architecture, Landscape, and Design (Faculty)
- **Kim McLean**, Chief Administrative Officer, Faculty of Arts and Science (Staff)
- **Fiona Miller**, Professor, Chair in Health Management Strategies, and Connaught Scholar, Institute of Health Policy, Management and Evaluation, Dalla Lana School of Public Health; Graduate Faculty, School of the Environment; Director, CASCADES - Creating a Sustainable Canadian Health System in a Climate Crisis; Director, Collaborative Centre for Climate, Health and Sustainable Care (Faculty)
- **Derek Newton**, Assistant Vice-President, Innovation, Partnerships and Entrepreneurship, Vice-President Research and Innovation (Staff)
- **Karen Shim**, Communications Associate, Vice-Provost, Academic Programs (Staff)
- **Shannon Simpson**, Director, Indigenous Initiatives, Vice-Provost, Academic Programs (Staff)
- **Romila Verma**, Sessional Lecturer, School of the Environment and Department of Geography, Faculty of Arts and Science (Faculty)

Statement of Acknowledgement of Traditional Land

We wish to acknowledge this land on which the University of Toronto operates. For thousands of years, it has been the traditional land of the Huron-Wendat, the Seneca, and the Mississaugas of the Credit. Today, this meeting place is still the home to many Indigenous people from across Turtle Island and we are grateful to have the opportunity to live and work on this land.



"Intertribal, 2022" is a mixed media mural by Quinn Hopkins installed at Hart House. Photo by Moussa Faddoul.

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President's Message

The 2023 Annual Report of the Committee on Environment, Climate Change, and Sustainability (CECCS) highlights University-wide advances in sustainability made over the last year.

You will find much to inspire and celebrate in the details that follow. Thanks to a dedicated community of students, scholars, academic leaders, staff, and partners, the University of Toronto's commitment to sustainability is evident in more areas of our teaching and learning, research, operations, and engagement than ever before. The report also demonstrates how this growing community of sustainability and climate champions is driving innovation and ingenuity not only in what we do, but in how we do it as an institution.

To name just a few achievements, this year saw the signing of the Tri-Campus Climate Positive Commitment — a first net positive commitment by a university across three major campuses in North America. The CECCS also launched a new internship program for students to learn about and contribute to the real-world sustainability challenges of the city and community organizations in the Toronto region.

As much as you will see progress in these pages, you will also see opportunity. The challenge of accelerating meaningful action and impact on sustainability is one that U of T takes seriously and looks forward to advancing in the years to come with the support of the CECCS members and secretariat.

On behalf of the University of Toronto, I extend my congratulations and appreciation to CECCS Co-Chairs, John Robinson and Ron Saporta; Subcommittee Chairs, Liat Margolis, Fiona Miller, Marc Couture, and Derek Newton; and to all CECCS and Subcommittee members for their leadership and achievements over this past year.

Meric Gertler

University of Toronto President

1

Introduction



CECCS Secretariat and Work-Study team members at the March 3, 2023 Adams Sustainability Celebration Award Ceremony. From left to right: Conchita Ferrao, Tory Grewar, Kristy Bard, Colleen McCauley, Lu Xi, and Ayako Ariga. Photo courtesy of Tory Grewar.

At the end of this year, we bring to a close the third consecutive term of the Committee on Environment, Climate Change and Sustainability (CECCS) (2017-2018, 2018-2020, and 2020-2023). During these six years, the University of Toronto has made major strides in developing and expanding its teaching, research, and operational activities related to sustainability. Through this work, the CECCS has connected and collaborated with a very large, active, and ever-growing community of sustainability champions at the University of Toronto. In the pages below, and our shorter online 2023 Annual Report Highlights, you will find details of what we are accomplishing together throughout the year.

We hope you will come away from our 2023 Annual Report with a sense of how our community has established a strong base on which to take the next step towards achieving our 2017 goal of making sustainability a core part of the U of T identity. This next step involves working towards changes that will enable our institution to actively and explicitly take on the societal challenge of sustainability, and will become the focus of our next phase of work at CECCS with our community at and beyond the University of Toronto.

2

2023 At a Glance

48

Staff, faculty, and students

participating as members in CECCS committees and subcommittees

29%

of Undergrad courses

at U of T have a sustainability orientation or focus

200%

Increase in registrations

at Adams Celebration events since last year

5,329

Experiential learners

enrolled in courses that involve work-integrated or community-engaged learning

11

Inventories and databases

tracking sustainability in U of T courses, experiential learning, research, projects, and groups

9/9

Vice-presidential portfolios

supporting the integration of sustainability into their work and across U of T

15+

Global climate networks

collaborating on accelerated climate action as part of the Network of Networks Co-Chaired by U of T

31%

Increase in undergraduate enrolment

across U of T's Sustainability Scholar programs since last year

3

Overall Activities

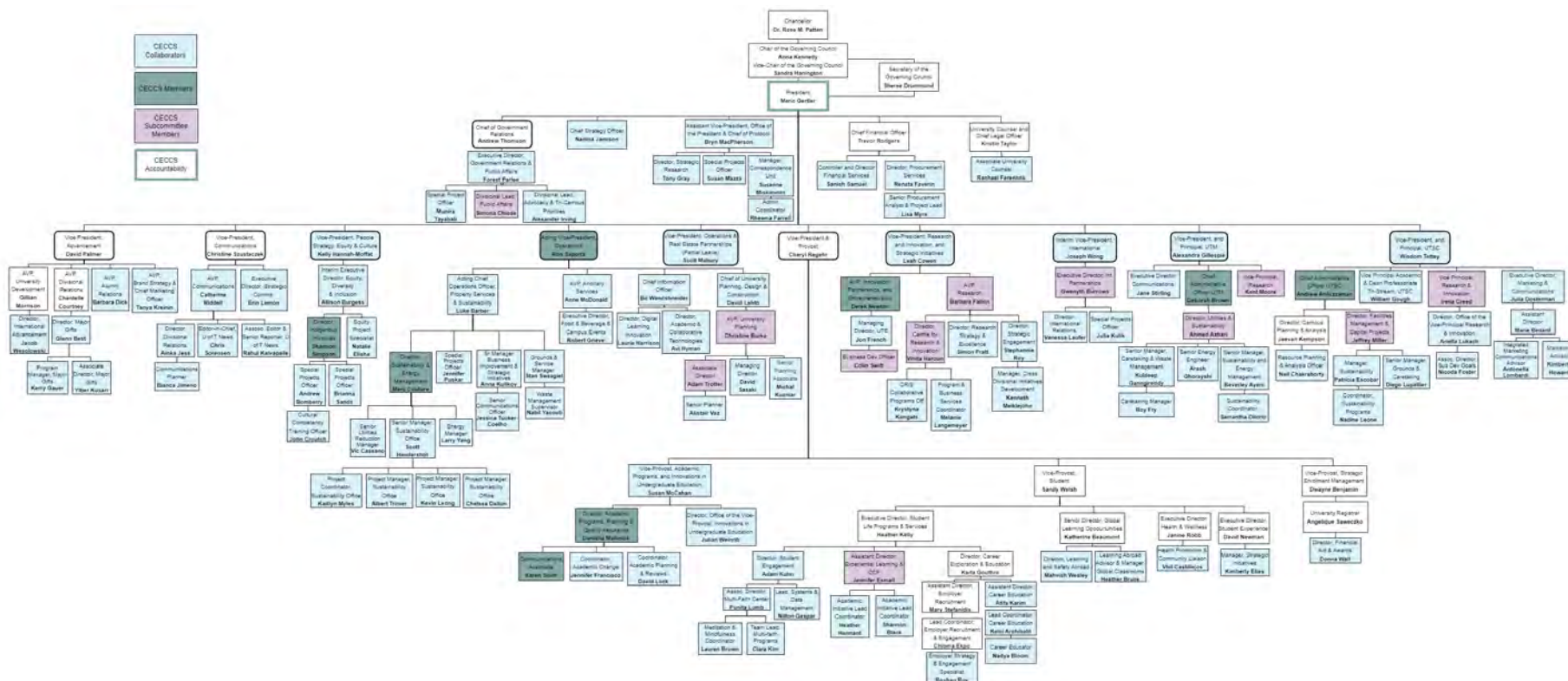


Kings College Road, University of Toronto St. George campus. Photo by Kristy Bard.

3.1 Embedding Sustainability through the University

As a general approach, CECCS works to enable, integrate, facilitate, and embed sustainability into everything that the University of Toronto does internally and externally. One way to reflect our progress on achieving this whole-institution approach to sustainability is the extent to which we are connecting with and embedding our work within and across the different parts of the University. In the above figures, we highlight our work with all nine vice-presidential portfolios as an indicator of executive involvement and leadership to CECCS sustainability integration activities. The more detailed image below and list of divisional collaborators that follows the image provide a snapshot of the faculty, staff, and administrators we are currently working with to promote and integrate sustainability into and across the entirety of the University of Toronto.

The following are our staff and faculty collaborators in the 9 vice-presidential portfolios across the University.



Total administrative and divisional numbers:

184

CECCS Collaborators

23*

CECCS Members

25**

CECCS Subcommittee Members

* Includes members whose membership ended during 2023, are external to U of T, or are otherwise not represented in the diagram or list.

** Includes students and external members who are not represented in the diagram or list.

The following are our staff and faculty collaborators in divisions across the University.

Green = CECCS or subcommittee members

Purple = subcommittee members

*CECCS emeritus members

Faculty of Applied Science and Engineering

- **Tamer El-Diraby**, Professor, Civil and Mineral Engineering
- **Sarah Haines**, Assistant Professor, Civil and Mineral Engineering
- ***Aimy Bazylak**, Professor, Mechanical and Industrial Engineering
- ***Bryan Karney**, Professor, Civil and Mineral Engineering
- **Christopher Yip**, Dean
- **Dionne Aleman**, Associate-Dean, Cross-Disciplinary Programs
- **D. Grant Allen**, Chair, Chemical Engineering and Applied Chemistry
- **Timothy Bender**, Professor, Chemical Engineering and Applied Chemistry
- **Sharon Brown**, Assistant Director, Cross-Disciplinary Programs
- **Vanessa Bullock**, Donor Relations Officer
- **Mel Duhamel**, Director, Technical Services and Operations, Department of Civil and Mineral Engineering
- **Heather MacLean**, Vice-Dean, Strategic, Professor Department of Civil and Mineral Engineering Canada
- **Eric Miller**, Professor, Civil and Mineral Engineering and Director
- **Shatha Qaqish-Clavering**, Director, Strategy and Operations, Climate Positive Energy ISI
- **David Sinton**, Professor, Mechanical and Industrial Engineering, Academic Director, Climate Positive Energy ISI
- **Marianne Touchie**, Associate Professor jointly appointed in Civil and Mineral Engineering and Mechanical and Industrial Engineering

John H. Daniels Faculty of Architecture, Landscape, and Design

- **Liat Margolis**, Director, Master of Landscape Architecture Program; Associate Dean, Research
- **Juan Du**, Dean and Professor
- **Petros Babasikas**, Director, HBA Architectural Studies Program
- **Daniel Chung**, Associate Professor, Building Science
- **Hans Ibelings**, Assistant Professor, Teaching Stream
- **Alstan Jakubiec**, Assistant Professor
- **Bomani Khemet**, Assistant Professor, Building Science
- **Jeannie Kim**, Associate Dean, Academic; Associate Professor, Teaching Stream
- **Vivian Lee**, Director, Master of Architecture; Assistant Professor, Teaching Stream
- **Robert Levit**, Associate Professor
- **Danijela Puric-Mladenovic**, Assistant Professor, Forestry

Faculty of Arts and Science

- **John Robinson**, Presidential Advisor on the Environment, Climate Change, and Sustainability; Professor, Munk School of Global Affairs and Public Policy and School of the Environment
- **Steve Easterbrook**, Director, School of the Environment; Professor, Computer Science
- **Romila Verma**, Sessional Lecturer, Geography
- **Karen Chapple**, Director, School of Cities; Professor in the Geography and Planning
- **Michael Classens**, Coordinator, Certificate in Sustainability; Assistant Professor, School of the Environment

- **Alexandra Rahr**, Director of Undergraduate Programs and Student Experience, Munk School; Assistant Professor, Teaching Stream
- **Stefan Soldovieri**, Chair, Department of Germanic Languages and Literatures
- **Nicole Spiegelaar**, Assistant Professor, School of the Environment; Assistant Director, Trinity Sustainability Initiative
- ***Jennifer Murphy**, Professor, Chemistry
- **Christian Abizaid**, Associate Professor, Geography and Planning, and School of the Environment
- **Ariana Bradford**, Executive Director, Munk School of Global Affairs and Public Policy
- **Theresa Brown**, Internship Program Coordinator, Arts and Science Internship Program
- **Adriana Caragea**, Assistant Professor, Cell and Systems Biology
- **Kiran Champatsingh**, Communications Officer, School of the Environment
- **Panna Chauhan**, Business Development Officer, Arts and Science Internship Program
- **Jessica D'eon**, Undergraduate Associate Director, School of the Environment; Associate Professor, Chemistry
- **Paolo Granata**, Associate Professor, Book and Media Studies, St. Michael's College
- **Melanie Jeffrey**, Assistant Professor, Human Biology/Centre for Indigenous Studies
- **Tamara Jones**, Associate Director, Enrolment Service and Records
- **Helena Juenger**, Assistant to the Chair, Graduate Assistant
- **Madeleine Lavin**, Administrative Coordinator, Office of the Assistant Provost, Trinity College
- **Colin McMahon**, Associate Director, Experiential Learning, Office of Experiential Learning and Outreach Support
- **Carrie Proctor**, Student Learning and Professional Development Coordinator, Arts and Science Internship Program

- **Greg Rupik**, Director, Office of the President Secretary, St. Michael's College
- **Meghan Sbrocchi**, Department Manager, School of the Environment
- **Stephen Scharper**, Associate Professor, Anthropology, and School of the Environment; Director of Sustainability, Trinity College
- **Keagan Urbanowicz**, Experiential Learning Coordinator, School of the Environment
- **Clare Wiseman**, Associate Professor, School of the Environment

School of Continuing Studies

- **Roxanne Wright**, Program Director, Business and Professional Studies

Ontario Institute for Studies in Education (OISE)

- **Hilary Inwood**, Lecturer; [Coordinator, Sustainability and Climate Action Network](#)
- **David Montemurro**, Associate Professor, Teaching Stream; Associate Director, Master of Teaching Program
- **Fikile Nxumalo**, Associate Professor, Curriculum, Teaching and Learning
- **Elisabeth Rees-Jonstone**, Executive Director, Continuing and Professional Learning
- **Jennifer Sumner**, Associate Professor, Adult Education and Community Development Program
- **Jenaya Webb**, Director, OISE Library

Faculty of Kinesiology and Physical Education

- **Cathy Amara**, Associate Dean, Undergraduate Education and Associate Professor, Teaching Stream
- **Caroline Fusco**, Associate Professor, Social Justice and Equity in Sport; Director, SPaCE (Sport, Physical activity and Cultural Environments) Lab

Rotman School of Management

- **Kenneth Corts**, Vice-Dean, Research, Strategy, and Resources; Academic Director of the Lee-Chin Institute for Corporate Citizenship
- **Jan Mahrt-Smith**, Associate Professor of Finance and cross-appointed to the School for the Environment; Academic Director, Rotman-Bocconi Global EMBA
- **Richard Blundell**, Executive-in-Residence
- **Walid Hejazi**, Professor of Economic Analysis and Policy
- **Rod Lohin**, Executive Director, Michael Lee-Chin Family Institute for Corporate Citizenship, and Senior Lecturer
- **Anita McGahan**, University Professor, Rotman School of Management and the Munk School of Global Affairs and Public Policy

Faculty of Medicine

- **Paul Hamel**, Professor, Laboratory Medicine and Pathobiology
- **Behdin Nowrouzi-Kia**, Assistant Professor, Occupational Science and Occupational Therapy

Faculty of Music

- **Farzaneh Hemmasi**, Associate Professor of Ethnomusicology, and School of Cities

Dalla Lana School of Public Health

- **Fiona Miller**, Professor, Chair in Health Management Strategies, and Connaught Scholar Institute of Health Policy, Management and Evaluation, Dalla Lana School of Public Health; Graduate Faculty, School of the Environment; Director, CASCADES - Creating a Sustainable Canadian Health System in a Climate Crisis; Director, Collaborative Centre for Climate, Health and Sustainable Care

- **Paula Braitstein**, Associate Professor, Epidemiology Division, and Centre for Global Health
- **Lissa Ceolin**, Associate Program Director, Occupational and Environmental Health Division
- **Erica Di Ruggiero**, Associate Professor, Centre for Global Health; Co-Chair, SDGs@UofT ISI
- **Blake Poland**, Associate Professor, Social and Behavioural Health Sciences Division
- **Nicole Simms**, Managing Director, Collaborative Centre for Climate, Health and Sustainable Care, Institute of Health Policy, Management and Evaluation
- **Helen Valkanas**, Research Officer, Collaborative Centre for Climate, Health and Sustainable Care, Institute of Health Policy, Management and Evaluation

University of Toronto Mississauga

- **Tenley Conway**, Professor, ENV Program Director, ENV Management Program Advisor Geography, Geomatics and Environment
- **Monika Havelka**, Associate Professor; ENV Program Director and ENV Science Program Advisor, Geography, Geomatics and Environment
- **Shashi Kant**, Professor; Director, Master of Science in Sustainability Management Program
- **Kent Moore**, Associate Vice-Principal, Research and Innovation; Professor, Department Chemical and Physical Sciences
- ***Claire Westgate**, Manager, External Partnerships and Communication, Institute for Management and Innovation
- **Matthew Adams**, Assistant Professor, Geography, Geomatics and Environment
- **Michelle Atkinson**, Sustainability Projects and Engagement Coordinator, Master of Science in Sustainability Management Program

- **Sarah Cherki El Idrissi**, Assistant Professor, Institute of Communication, Culture, Information and Technology
- **Linnet Kocheril**, Placement and Employer Relations Manager, Master of Science in Sustainability Management Program
- **Michael Liut**, Assistant Professor, Mathematical and Computational Sciences
- **Tingting Zhu**, Assistant Professor, Geography, Geomatics and Environment

University of Toronto Scarborough

- **Daniel Bender**, Professor, Historical and Cultural Studies
- **Irena Creed**, Associate Vice President, Research and Innovation; Professor, Physical and Environmental Services
- ***Nicole Klenk**, Associate Professor, Physical and Environmental Science
- ***Jim MacLellan**, Assistant Professor; Director, Environmental Studies Program, Physical and Environmental Science
- **Marc Cadotte**, Professor, Biological Sciences/SDGs@UofT ISI Co-Chair
- **Martha Harris**, Academic Programs Officer, Office of Vice Principal Academic and Dean
- **Béatrice Lego**, Campus Farm Coordinator
- **Kris Kim**, Assistant Professor, Physical and Environmental Sciences
- **Imre Szeman**, Director, Institute for Environment, Conservation, and Sustainability
- **Laura Tozer**, Assistant Professor, Physical and Environmental Sciences

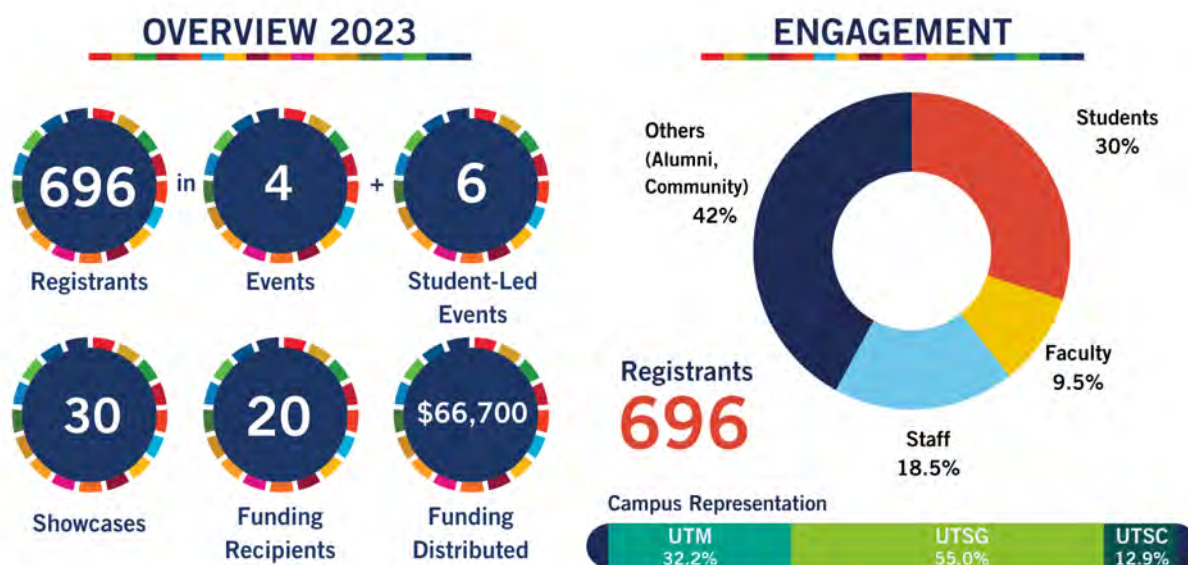
Factor-Inwentash Faculty of Social Work

- **Barbara Fallon**, Professor

3.2 2022-2023 Adams Sustainability Celebration

For the third year, the [Adams Sustainability Celebration](#) served as a focal point for the U of T community to celebrate successes, inspire new activities, build relationships, and collaboratively deepen campus engagement around sustainability. This year, we attracted more participants overall, and were able to host in-person events with pandemic restrictions lifted. The introduction of the new \$5,000 grant for U of T staff successfully attracted compelling applications from staff across all three campuses.

We kicked off the 2022-2023 Celebration in September 2022, promoting the \$5,000 student, staff, and faculty grants in addition to the \$25,500 Innovation Prize Competition during Orientation Week. A CECCS work-study student designed [a beautiful pull-up Celebration banner](#) that was displayed prominently at our Orientation event table, in addition to other Celebration events.



The 2022-2023 Celebration included four main events:

- November 22, 2022 — [Our Climate is Changing: The Story our Data is Telling us about Climate in Mississauga](#) (in-person event co-hosted by the UTM Sustainability Office, with support from the UTM Principal’s Sustainability Advisory Committee and the City of Mississauga; included 13 showcases).
- January 18, 2023 — [The Sustainable Development Goals and the Transformative Role of Universities](#) (webinar co-hosted with UTSC Sustainability Office).
- February 16, 2023 — [Exploring the Potential of Transformative Sustainability Pedagogy](#) (webinar co-hosted with the Community of Practice on Sustainability Teaching).
- March 3, 2023 — Adams Sustainability Innovation Prize Pitch Competition and Award Ceremony (in-person at Hart House Great Hall; included opening remarks by President Meric Gertler and 18 showcases).

New this year, we also supported six student-led events, offering up to \$300 in funding to each. A total of \$1,200 was distributed to support the following:

- October 17, 2022 — *Healing Nature Walk* hosted by UTSC Parks Canada in collaboration with Mental Unity Group; held during UTSC Sustainability Week.

- October 26, 2022 — *Baking Workshop: Pumpkin Pie and Sustainable Agriculture* organized by Regenesis UTSC in partnership with the Scarborough Student Union Food Centre and Culinaria Kitchen.
- November 21, 2022 — *Upcycling Swap Shop* hosted by UTM Regenesis.
- January 28, 2023 — *Back to the Future of Sustainable Urban Development* conference hosted by the Sustainable Engineers Association.
- February 1, 2023 — *Futuring Sustainability Interactive Workshop* hosted by the Master of Public Policy Student Association (MPPSA).
- February 2, 2023 — *Fossil Free Research Teach-In* hosted by Climate Justice U of T.

Further details of this year's [grant winners and Innovation Prize finalists can be found on our website](#).



Adams Innovation Prize Winners Priya Patel and Mark Spahl from MissionE. Photo by Tianlei Wu.

3.3 Communications

Over the course of the last year, the CECCS Secretariat worked with communications and sustainability colleagues across the University towards a more unified communications strategy and approach for the benefit of internal and external sustainability stakeholders. With the help of Foster Interactive, an external design and development agency, CECCS engaged stakeholders and prospective web users to outline priorities, themes, and opportunities for a shared strategic messaging and an improved web presence for sustainability initiatives across all three campuses. We've also strengthened our partnership with University of Toronto Communications (UTC) to ensure ongoing community awareness of relevant sustainability, environment, and climate news. More information on U of T's sustainability communications can be found in UTC's environment, climate change and sustainability communications report in [Appendix 2](#).

In addition, we made a number of improvements to CECCS communications tools, including a brand refresh of [our Linktree](#), updates to the format and [subscription form](#) to our monthly newsletter, as well as

minor changes to [our website](#), to improve the look and navigation. Overall, these changes resulted in more successful interactions with our community.

To celebrate and promote U of T community members who are leading change for a sustainable future, the UTC team released a five-part video series this year titled [Sustainable Future — Challenge Accepted!](#)

- [Episode One on Changemakers](#) features alumni who are championing new discoveries and initiatives in climate innovation, social justice, and green tech.
- [Episode Two on Climate Resilience](#) was directed and filmed by Charlotte Wargniez to provide a student perspective on how UTSC students feel about eco-anxiety, the global impact of climate change, and paths towards sustainability.
- [Episode Three on Green Tech and AI](#) explores how U of T researchers are using artificial intelligence, machine learning, climate informatics, and data crowdsourcing to help inform an equity-based response to the climate crisis.
- [Episode Four on Climate Justice](#) features CECCS Teaching & Learning Subcommittee Chair Liat Margolis and others discussing how Indigenous sovereignty and justice are fundamental to climate change policy and action.
- [Episode Five on Equitable Communities](#) includes interviews with CECCS Co-Chair Ron Saporta and Engagement & Partnerships Subcommittee member Karen Chapple discussing the intersection between equity, the environment, and the economy.

All five episodes, plus three short reels featuring some remarkable student initiatives, can be viewed on this [Sustainable Future — Challenge Accepted! YouTube playlist](#).



Episode 1 of the Sustainable Future — Challenge Accepted! video series highlights the U of T Changemakers who are leading the future of sustainability. From left to right: Kehkashan Basu, president and co-founder of Green Hope Foundation, Olugbenga Olubanjo, founder of green-tech startup Reeedi, and Avneet Ghotra, co-founder of biomaterials startup ALT TEX.

3.4 Sustainability Inventories/Resources

The CECCS maintains the below inventories on our website which serve as a resource to anyone interested in tri-campus sustainability activities at U of T:

- [Sustainability Undergraduate Course Inventory](#) (last updated September 2023; [section 4.6](#))
- [Sustainability Graduate Course Inventory](#) (last updated November 2022; [section 4.10](#))
- [Sustainability Experiential Learning \(EL\) Course Inventory](#) (last updated October 2023; [section 4.7](#))
- [Sustainability School of Continuing Studies Course Inventory](#) (last updated November 2022; [section 4.10](#))
- [Sustainability Graduate Program Inventory](#) (last updated 2021; [section 5.6](#))
- [Sustainability Master's Thesis Inventory](#) (last updated August 2023; [section 5.6](#))
- [Sustainability Doctoral Thesis Inventory](#) (last updated August 2023; [section 5.6](#))
- [Sustainability Research Unit Inventory](#) (last updated 2021; [section 5.6](#))
- [Campus as a Living Lab Course Inventory](#) (last updated October 2023; [section 4.9](#))
- [Campus as a Living Lab and Experiential Learning Project Database](#) (last updated October 2023; [section 4.8](#))
- [Sustainability Student Group Inventory](#) (last updated November 2022; [section 7.8](#))

4

Teaching & Learning



Isaac Crosby, Indigenous Agriculture & Plant Knowledge Keeper, with ENV463/1063 Edible Campus students at the UTSC Campus Farm on September 20, 2023. Photo by Kristy Bard.

4.1 Introduction

In 2023, the [Teaching & Learning \(T&L\) Subcommittee](#), chaired by Associate Professor Liat Margolis, and partners such as the [Community of Practice \(CoP\) on Sustainability Teaching](#) provided active leadership to a wide range of initiatives. The Subcommittee met four times since the last annual report to make further progress on its goal of infusing sustainability teaching and learning opportunities across all disciplines, while advancing criticality and transformation. The CoP also hosted four professional learning events, as described on the [CoP website](#).

Teaching & Learning Subcommittee Membership

- **Liat Margolis** (Chair), Associate Professor, and Director, Green Roof Innovation Testing Laboratory, Faculty of Architecture, Landscape, and Design
- **Daniel Bender**, Canada Research Chair in Food and Culture; Director, Culinaria Research Centre; Professor, Historical and Cultural Studies, UTSC
- **Sean Cameron**, Master of Public Policy (Graduate Student Representative)
- **Chris Choi**, BA Candidate, Environmental Science and Environmental Studies, UTSC (Undergraduate Student Representative)
- **Michael Classens**, Assistant Professor, School of the Environment
- **Tamer El-Diraby**, Professor, Faculty of Applied Science and Engineering
- **Monika Havelka**, ENV Science Program Advisor; Associate Professor, Geography, Geomatics and Environment, UTM
- **Sarah Haines**, Assistant Professor, Civil and Mineral Engineering, Faculty of Applied Science and Engineering
- **Hilary Inwood**, Coordinator, Sustainability and Climate Action Network; Lecturer, Ontario Institute for Studies in Education (OISE)
- **Daniella Mallinick**, Academic Programs, Planning & Quality Assurance, Office of the Vice-Provost, Academic Programs (to Oct. 2023), Assistant Dean, Office of the Vice-Principal, Academic and Dean, UTM, (from Nov. 2023) (Staff)
- **Alexandra Rahr**, Director of Undergraduate Programs and Student Experience, Munk School; Assistant Professor, Centre of the Study of the United States
- **Nicole Spiegelaar**, Assistant Professor, Associate Director of Trinity Sustainability Initiative
- **Maria Vamvalis**, PhD Candidate, OISE (Graduate Student Representative)
- **Romila Verma**, Sessional Lecturer, School of the Environment/Geography and Planning
- **Ryan Wang**, BSc, Astronomy and Physics (Undergraduate Student Representative)

The T&L Subcommittee introduced two new major activities this year: Emerging Principles for Sustainability Teaching and Governance; and Agent of Change for Sustainability Workshop.

4.2 Emerging Principles for Sustainability Teaching and Governance

The development of seven principles have emerged from the collective expertise and experience of sustainability teachers at U of T, as well as review and reflection on similar work in the literature. The draft emerging principles highlight the need for sustainability teaching, teachers, and learning institutions to:

1. Recognize environmental justice as foundational approaches and processes, and not relegated to a theme.
2. Recognize student eco-anxiety and need for teaching on critical hope.
3. Define sustainability as a process-based approach rather than a container for "topics."
4. Define interdisciplinarity in a more precise manner.

5. Recognize the importance of place-based and land-based education and connection to communities for project-based, community-engaged, experiential, and service learning.
6. Identify, analyze, and implement a range of student-centred learning strategies that move beyond lecture (e.g., inquiry-based learning, problem-based learning, community-engaged and experiential learning) to develop students' capacity for knowledge and solution co-production and their agency in shifting towards climate justice and regenerative sustainability.
7. Align assessment practices with transformative, interdisciplinary, and transdisciplinary sustainability pedagogy.

A group of students in Professor John Robinson's ENV461 Campus as a Living Lab (CLL) fall course is also supporting the T&L Subcommittee in further advancing and refining these principles. As part of their CLL project, the students are reviewing scholarly publications on sustainability pedagogy and conducting an environmental scan of peer institutions. Their review will include documents and websites that reference sustainability teaching guiding principles and associated institutional or divisional implementation plans for findings and best practices relating to our work at U of T. In addition, the students are looking into sustainability education networks such as a UNESCO-commissioned working group on [Competences in Education for Sustainable Development](#) (PDF).

The students have been asked to deliver a synthesis of findings from the literature review and environmental scan; a summary list of principles and pedagogical strategies by humanities, sciences, and social sciences adopted by peer institutions; and recommended revisions to the emerging principles. The goal is to identify gaps and offer recommendations for further development and refinement of the draft principles. The students' final report will be shared with the T&L Subcommittee to inform future discussion and documentation of the principles, which will be shared with the wider teaching and learning community at U of T.

4.3 Agent of Change for Sustainability Workshop

In March 2023, the inaugural Agent of Change for Sustainability Workshop was held at First Nations House. The event program was initiated on the basis of discussions within the T&L Subcommittee and further developed and delivered with partners and speakers from the Office of Indigenous Initiatives (John Crouch), OISE (Hilary Inwood, also of the T&L Subcommittee, and Máiri McKenna Edwards), the School of the Environment (Michael Classens, also of the T&L Subcommittee), Careers Exploration and Education (Kelci Archibald and Nadya Bloom), Health and Wellness (Vhil Castillejos), and the Multi-Faith Centre (Punita Lumb). Also instrumental to the workshop design was the rest of the workshop advisory group: Liat Margolis, T&L Subcommittee Chair, Romila Verma, School of the Environment and of the T&L Subcommittee, and Kristy Facer, Director of the CECCS Secretariat.

This workshop was open to all U of T students — undergraduate or graduate — nearing graduation and aimed to bring together and equip those aspiring to take sustainability action in their future workplaces. It explored what lessons young change agents can learn from Anishnaabe teachings, values, and experiences, as well as how relationships and community are central to collective action. The workshop also provided participants with guidance on self-care and crafting a career for positive change.



March 24, 2023, Agent of Change pilot workshop. Photo by Kristy Faccor.

4.4 Sustainability Pathways Program

Our [Sustainability Pathways Program](#) continues to grow, with the U of T Mississauga (UTM) campus having secured approval for their new Sustainability Certificate Program this spring for enrolment in the 2024 academic year. This is the sixth Sustainability Scholar program available to students in the following five largest undergraduate divisions across three campuses:

- Faculty of Applied Science and Engineering
- Faculty of Architecture, Landscape, and Design
- Faculty of Arts and Science
- University of Toronto Mississauga
- University of Toronto Scarborough



Addition of this latest program means sustainability curriculum will be available to 86% of undergraduates. The total number of enrolled students in the Scholar programs across four divisions as of September 2023 was 728, a 31% increase over last year.

As we look forward to the continued expansion of the Scholars program, a major continuing challenge lies in ensuring uptake from students who are not focusing on sustainability issues in their program (e.g., as a major). This will be a major focus for upcoming work on the Scholars program.

We continue to grow our [Sustainability Citizen](#) program launched last fall by offering in-person sessions of the Introduction Module and promoting the program to students during Orientation events in September. As of October, 254 students had enrolled in the program on CLNx, with 16 students having successfully completed it. The Sustainability Citizen program allows students to receive Co-Curricular Record (CCR) recognition for any extracurricular activities related to the Sustainable Development Goals (SDGs). The tri-campus [Sustainability Event Calendar](#) lists many activities students can earn credit for by attending.



*March 27, 2023, In-Person Sustainability Citizen Introduction Session hosted by the Sustainable Engineers Association.
Photo by Lily Kim.*

4.5 Community of Practice (CoP) on Sustainability Teaching

Launched in 2022, the [Community of Practice \(CoP\) on Sustainability Teaching](#) is funded by the School of the Environment and the Jackman Humanities Institute (JHI). Led in collaboration with members of the T&L Subcommittee, it is a forum for dialogue and collaboration between faculty members, students, program directors, and staff to reflect on sustainability pedagogy in comprehensive, coordinated, and transdisciplinary ways across multiple divisions. Over the summer of 2023, a CECCS graduate Work-Study student helped report on lessons learnt from the CoP initiatives and plan for future CoP webinars. The 2023 [CoP Annual Report](#) (PDF) offers more details about these activities and can be found online.

4.6 Sustainability Undergraduate Course Inventory

The [Sustainability Course Inventory](#) gathers information about all sustainability-related undergraduate courses at U of T. It includes 2,061 sustainability-oriented courses, representing 29.87% of all 6,899 undergraduate courses offered in 2023-24. This is an increase from 25% of undergraduate courses the previous year. The purpose of the sustainability course inventory is to increase the visibility of such courses, making it more accessible for students to add sustainability content to their educational experience. We hope to encourage deeper understanding of the societal shift towards sustainability, and to contribute to the creation of a culture of sustainability at the University.

Our understanding of sustainability englobes both human and environmental concerns, and the inventory was created based on keywords from the United Nations' [Sustainable Development Goals](#) or SDGs (see [Appendix 3](#) for a full list of SDG keywords developed by the T&L Subcommittee). The SDGs were chosen as a basis for the inventory due to their comprehensiveness and widespread usage in the sustainability field.

Annual updates to the inventory are labour intensive and subjective due to the final step in the inventory methodology, a manual review of sustainability keyword application in course descriptions. A project has therefore been launched this year to explore the potential to automate this manual review to determine relevance to a particular SDG or sustainability more generally. Powered by rapidly advancing machine learning technology and, more specifically, natural language processing tools, this project will identify opportunities for increased efficiency and better statistical certainty in the course review and inventory updating process.

4.7 Sustainability Experiential Learning (EL) Course Inventory

This year we changed the name of our previously known Community-Engaged Learning (CEL) Course Inventory to the Experiential Learning (EL) Course Inventory to better align with terminology used by the [Centre for Community Partnerships](#) and the [U of T Experiential Learning Hub](#). CEL (sometimes known as Service Learning) is a form of EL that is focused on engaging grassroots, community, and public, non-profit organizations in ways that respond to partner-led priorities and is reciprocal, so both the partner and students benefit. Our EL Course Inventory also includes other types of EL including courses involving for-profit partners, for example, as is the case for many Work Integrated Learning opportunities.

We hope this change will reduce confusion and allow for better collaboration when it comes to expanding and promoting all forms of EL sustainability courses at U of T.

We also updated our keywords to reduce the number of false positives turning up in our manual review, as outlined below:

- Replaced “community” with “community engag*”; “community-engag*”
- Replaced “service” with “service-learning”; “service learning”
- Replaced “capstone” with “capstone project”

[This year's inventory](#) includes 117 courses, representing 5.6% of all sustainability undergraduate courses. This is an increase from the 4.4% of EL courses captured in last year's inventory.

4.8 Campus as a Living Lab (CLL) and Experiential Learning (EL) Project Database

There are now a total of 411 projects in our [Campus as a Living Lab \(CLL\) and experiential learning \(EL\) project database](#) tagged by SDGs. Of the 411 projects, 164 are CLL projects, and 247 are EL projects addressing various sustainability challenges in collaboration with partners on and off campus. We invite members of the campus community to browse this searchable database, as many projects and reports can be downloaded to facilitate knowledge sharing and for others to build off the work done previously.



Students Sofia Padernal, Jessica Armstrong and Hilda-Matilda Idegwu deliver a presentation to City of Toronto staff about strategies to decarbonize existing buildings. Photo by Geoffrey Vendeville.

4.9 Campus as a Living Lab for Sustainability Courses

Every year, the CECCS Secretariat seeks to support matchmaking of CLL courses with projects. Dedicated support is also provided to solicit projects for two School of the Environment CLL courses: John Robinson's ENV461: The U of T Campus as a Living Lab of Sustainability, and Alstan Jakubiec's ENV1103: Living Labs for Applied Sustainability. The projects and staff of faculty clients for this fall are listed below.

Fall 2023 ENV461 Projects

1. University of Toronto Internal Carbon Pricing for Capital Project Planning — Adam Trotter, University Planning, Design, and Construction (UPDC)
2. Campus as a Living Lab Expansion Options for the University of Toronto — Kristy Bard, CECCS
3. Literature Review of Emerging Sustainability Teaching Principles — Ayako Ariga, CECCS

4. Sustainable Change: Courses Program Assessment and Improvement Recommendations — Chelsea Dalton and Scott Hendershot, University of Toronto St. George Sustainability Office (UTSG SO)
5. Organic Waste Recycling and Urban Agriculture at Trinity College — Madeleine Lavin, Trinity College
6. Farming to Carbon Sequestration: Assessing the UTSC Campus Farm as a Carbon Sink — Béatrice Lego, UTSC

Fall 2023 ENV1103 Projects

1. Reshaping the Green Lawn: Choosing Native Plants and Sustainable Landscapes for the Southwest Corner of Huron and St. George — Adriana Caragea, Assistant Professor, Department of Cell and Systems Biology
2. Best Practices, Assessment, and Evaluation of Multi-Campus Waste Audits — Chelsea Dalton, UTSG SO and Dione Dias, CECCS
3. Optimizing the Carbon Intensity of Existing University Spaces — Kevin Leong, UTSG SO
4. Risky Business: University Campus Climate Change Risk Analysis — Albert Trinier, UTSG SO
5. Back to Our Roots: Welcoming Local Flora Back to St. Mike's — Greg Rupik, St. Michael's College

We also maintain a list of [other courses that contain elements of CLL principles](#) on our website.

4.10 Resources — Other Inventories

In 2022, we added the School of Continuing Studies (SCS) and graduate course inventories to our list of various sustainability-related courses. The [Graduate Sustainability Course Inventory](#) features 1,987 of 7,744 graduate courses (26%), while the [School of Continuing Studies Sustainability Course Inventory](#) includes 468 of 874 SCS courses (54%). These new inventories will be part of campus submissions to the Association for the Advancement of Sustainability in Higher Education (AASHE)'s Sustainability Tracking, Assessment & Rating System (STARS) certification, as a demonstration of U of T's contribution to sustainability teaching and learning.



University of Toronto Scarborough Environmental Science students on a field trip at Highland Creek. Photo by Ken Jones.

5

Research



General views of the revitalization of University College. Photo by Matthew Volpe.

5.1 Introduction

Activating its mandate to catalyze the research mission of U of T with sustainability in mind, the [Research Subcommittee](#), chaired by Professor Fiona Miller, saw three major outcomes for 2023: the ‘Integrating Sustainability Considerations into Research’ Initiative, a Transdisciplinary Co-Production Pilot Workshop, and publication of an article on whole institution governance for sustainability.

Research Subcommittee Membership

- **Fiona Miller** (Chair), Professor, Chair in Health Management Strategies, and Connaught Scholar, Institute of Health Policy, Management and Evaluation, Dalla Lana School of Public Health; Graduate Faculty, School of the Environment; Director, CASCADES - Creating a Sustainable Canadian Health System in a Climate Crisis; Director, Collaborative Centre for Climate, Health and Sustainable Care
- **Tenley Conway**, ENV Program Director, ENV Management Program Advisor; Professor, Department of Geography, Geomatics and Environment, UTM

- **Kenneth S. Corts**, Vice-Dean, Research, Strategy, and Resources; Academic Director of the Lee-Chin Institute for Corporate Citizenship; Professor, Rotman School of Management
- **Irena Creed**, Associate Vice-President, Research and Innovation; Professor, Department of Physical and Environmental Sciences, UTSC
- **Erica Di Ruggiero**, Co-Chair, SDGs@UofT ISI; Associate Professor, Centre for Global Health, Dalla Lana School of Public Health
- **Barbara Fallon**, Professor, Faculty of Social Work
- **Vinita Haroun**, Director, Centre for Research Innovation and Support (CRIS)
- **Amanda Harvey-Sánchez**, PhD Candidate, Anthropology (Graduate Student Representative)
- **Nicole Klenk**, Associate Professor, Department of Physical and Environmental Sciences, UTSC
- **Kent Moore**, Associate Vice-Principal, Research and Innovation; Professor, Department Chemical and Physical Sciences, UTM

5.2 Integrating Sustainability Considerations into Research Initiative

In December 2022, the Research Subcommittee launched an initiative titled 'Integrating Sustainability Considerations into Research' with the objective of assessing the potential for U of T to adopt a common institutional framework around sustainability.

Sustainability is one of U of T's [strategic priorities and commitments](#), and the University regularly asks its researchers how their work aligns with [U of T's Institutional Strategic Research Plan](#)'s seven thematic areas, one of which is "Sustain: Societies, the Environment, and Natural Resources." However, it should be recognized that all research activities can be subjected to a sustainability lens and that all research has a bearing, implicitly or explicitly, on sustainability considerations.

Noting the importance of consultations and considerations of complementary initiatives to ensure synergies and avoid duplications, the project involved the following:

1. Brief narrative history contextualizing how Tri-Council funding agencies and institutions of higher education in Canada have embedded analytical processes aimed at "normalizing" or integrating analogous considerations into research.
2. Literature review on challenges and best practices associated with integrating such efforts into research in a university-wide manner.
3. Environmental scan of current initiatives integrating sustainability into research.
4. Consultations with subject-matter experts, research administration stakeholders, and researchers.

The in-depth exploration of analogous research integration efforts has provided valuable insights on how to arrive at a conceptualization of "sustainability," and what indicators define the extent of integration. The work also highlighted opportunities and considerations for implementation, including roll-out strategies and support tools for successful integration over time and with different stakeholders. The project produced a conceptual framework that identifies two fundamental aspects of the research process: conduct and content. We've identified examples of integration according to cognitive, behavioural, and systemic dimensions of depth and breadth of integration within a research system. Opportunities for the next phase of this project are currently under review by the Research Subcommittee and are expected to involve further consultation and development of initial areas for integration.

5.3 Transdisciplinary Co-Production Pilot Workshop

Academic research can often be extractive, where the world is seen primarily as a source of data, and where the interests of society are seen as distant from more conventional academic goals. Engaged scholarship that involves partnership with non-academic stakeholders and addresses the real-world and complex challenges of sustainability and climate change requires a different approach to building knowledge and facilitating action. Such engaged scholarship is more solutions-focused and involves deeper engagement and co-creation of knowledge, methods, and solutions with non-academic partners, as well as different research governance processes. Little guidance is typically provided to researchers on how best to undertake such work.

To address this gap, the CECCS is hosting a transdisciplinary sustainability knowledge co-production (TDCP) training workshop for early-career researchers, postdoctoral fellows, and PhD students on approaches to transdisciplinary community-engaged research. The planned pilot is expected to be two sessions. One will be delivered in person, introducing the concept of TDCP research and offering a discussion of the perspectives of different academic and non-academic partners. The second will be offered online, with tools and good practices, among other potential topics.

This year, the [University Climate Change Coalition \(UC3\)](#), a network of 23 of the world's leading research universities, invited its member universities to organize TDCP workshops modelled after U of T's as part of their efforts to build capacity for co-production research.

5.4 Whole Institution Governance Paper

Reflecting our strong emphasis on and interest in sustainability governance issues, a research paper co-authored by the nine 2019-21 Adams Sustainability Champion Interns and partners in 10 universities around the world titled "[Odd couples: Reconciling academic and operational cultures for whole-institution sustainability governance at universities.](#)" has been published in the *International Journal of Sustainability in Higher Education*. This paper explores barriers and pathways to a whole-institution governance of sustainability within the working structures of universities, drawing on multi-year interviews and hierarchical structure analysis of 10 universities in Canada, the United States, Australia, Hong Kong, South Africa, Brazil, the United Kingdom, and the Netherlands that have strong sustainability programs.

The paper discusses the need for integration between the two organizational sides of universities (academic and operations) and suggests approaches for better embedding sustainability into four primary domains of activity: education, research, campus operations, and community engagement.

Lessons from the 2019-2021 Adams Champions Internship program have now informed a new program focused on community partners made possible with funds from Wendy Adams. Our new Summer Sustainability Internship program was piloted in 2023 to more positive feedback this year. See [Section 7.2](#) for more details.

This year also saw the publication of [Conversations on Ethical Leadership: Lessons Learned from University Governance](#), edited by Ingrid Leman Stefanovic. This book includes a chapter titled "University Responses to and Obligations for Business Air Travel Emissions," co-authored by John Robinson, Dione

Dias, Ayako Ariga, Rashad Brugmann, Nicolas Côté, Meghan Henderson, Andrea Muehlebach, Rutu Patel, Jennifer Puskar, and Peter Vuong.



Students enjoying the new King's College Circle green space as part of the Landmark Project, in front of University College.
Photo by Kristy Bard.

5.5 Urban Climate Action Project (UCAP)

The purpose of the [Urban Climate Action Project \(UCAP\)](#) is to bring the resources and capacities of the University to help the City of Toronto achieve its [TransformTO](#) climate policy goals. With funding from President Meric Gertler, CECCS hired a UCAP postdoc, Dr. Kim Slater, to co-lead UCAP from 2021-25 with Professor John Robinson, CECCS Co-Chair and member of the City's new [Climate Advisory Group](#) and the TransformTO Technical Advisory Group. Below is a summary of grant-funded projects and completed work.

A Mitacs grant and partnership with Social Innovation (SI) Canada supported a Transformational Climate Action project, whereby Kim Slater synthesized the work of 37 community-engaged learning student project reports, including those produced by 56 first-year Munk School Master of Global Affairs and Master of Public Policy students from John Robinson's Winter 2022 GLA2029 course. The [final report](#) (PDF) is shared on the UCAP website. The GLA2029 students undertook 12 projects that came from clients from the City and [The Atmospheric Fund \(TAF\)](#) related to TransformTO goals. They have been posted on the CECCS [EL/CLL student project database](#). On January 16, 2023, John and Kim led a workshop with staff from [Social Innovation Canada](#), the Environment and Climate Division of the City of Toronto, and TAF to "backcast" implementation of some of the key findings from this synthesis. This [Transformational Climate Action Ideation and Backcasting Workshop summary report](#) (PDF) is also shared on the UCAP website.

Kim and John also co-edited a special issue of the journal *Buildings and Cities* on how cities around the world are advancing their climate goals. The issue includes their [editorial](#), as well as an article co-written with City staff on [Assessing climate action progress of the City of Toronto](#) (*Buildings and Cities*, Volume 3:1, December 2022).

In June 2022, the UCAP team, in partnership with Sustainable Buildings Canada and the Environment and Climate Division of the City of Toronto, convened industry representatives, city officials, and other stakeholders in a workshop on how to overcome the major barriers to achieving the TransformTO goals in the buildings sector. [This workshop](#) served as a pilot for a Social Sciences and Humanities Research Council (SSHRC) Connections-funded Low Carbon Workshop Series taking place over 2023 to uncover barriers related to the other top emissions-producing sectors: transportation, energy, and waste. The first two of these workshops, focused on overcoming barriers to low carbon transportation and energy, took place in June 2023, and was delivered in partnership with the City of Toronto and three U of T Institutional Strategic Initiatives (ISIs): the Mobility Network, Climate Positive Energy, and the SDGs@UofT. The final workshop on waste is planned for early 2024. The first two workshop reports are linked below.

- [Low-Carbon Mobility Post-Workshop Report \(PDF\)](#)
- [Energy Post-Workshop Report \(PDF\)](#)

UCAP and CECCS are working on the idea of net-positive environmental and human outcomes with the \$300 million St. Lawrence Centre for the Arts redevelopment project. That project was the focus of Sustainable Buildings Canada's [2022 Better Buildings Boot Camp](#) for graduate students from eight Ontario universities and colleges (see [Section 6.7](#)).

In April 2023, UCAP launched a four-year, SSHRC Insight-funded project called [Visionary Communities \(VC\)](#) in/with the Kingston-Galloway Orton (KGO) neighborhood in East Scarborough. Together, researchers from U of T and Toronto Metropolitan University (TMU) and staff of the East Scarborough Storefront and Catalysts' Circle will co-create and utilize a multi-channel approach combining arts, participatory modelling, youth engagement, and more to surface visions and aspirations that residents and community groups have for the future of their neighbourhood. In the process, opportunities for low carbon resilience will be identified and solutions piloted, evaluated, and iterated with partners and community members.

UCAP was actively engaged in the UTSC Canada Excellence Research Chair (CERC) proposal to support community-engaged research and action on just energy transitions in marginalized neighborhoods. With the CERC now approved, UCAP and the VC team are excited to begin exploring potential synergies.

Finally, thanks to the tremendous work of UCAP graduate student Emily Smit, [UCAP now has a website](#). The website shares student work, project updates, and upcoming events and workshops. Working across the aforementioned projects and on their own respective graduate research papers related to advancing the TransformTO targets are a dynamic group of graduate students with diverse disciplinary backgrounds. As of September 2023, there are four PhD students and three master's students in this group (listed below), in addition to seven recent graduates. As they are approved, their theses will be posted on the CECCS [EL/CLL project database](#).

UCAP current graduate students

- Gregoire Benzakin, "Unsettled digital infrastructures" (PhD, John Robinson)
- Garrett Morgan, "Equity, justice, and municipal climate action planning in Amsterdam, Glasgow, New Orleans, and Toronto" (PhD, John Robinson/Blake Poland)
- Emily Smit, "Retrofitting Toronto's single-family homes through net-zero to net-positive" (PhD, John Robinson)

- Majd Al-Shihabi, "Participatory modelling for housing as a climate solution" (PhD, Heather Dorries/John Robinson)
- Desiree Kosciulek, "Exploring strategies to encourage effective youth participation in local climate policies" (Master of Environment and Sustainability, John Robinson)
- Osayus Ize-Iyamu, "Evaluating the integration of EDI within the green building strategies of Canada's major urban centres" (Master of Science in Sustainability Management, John Robinson)
- Vivian Patel, "Assessing the City of Toronto's readiness to achieve net-zero target for emissions generated from transportation" (Master of Science, Geography and Planning, John Robinson)



5.6 Resources for the Research Subcommittee

The CECCS maintains the following SDG-based inventories to support sustainability research at U of T:

- [Sustainability Graduate Program Inventory](#) (2021) — 119 of a total of 171 programs (70%) have been found to have sustainability-related content
- [Sustainability Research Unit Inventory](#) (2021) — 133 of 154 research units (86%) have been found to be sustainability oriented
- [Sustainability Master's Thesis Inventory](#) (2009-2023) — 3,023 of 10,353 Master's theses (29%) have been found to have sustainability content
- [Sustainability Doctoral Thesis Inventory](#) (2009-2023) — 3,973 of 12,268 doctoral theses (32%) have been found to have sustainability content



View of University College. Photo by Kristy Bard.

6

Operations



New native plants and irrigation as part of the Landmark Project at King's College Circle. Photo by Kristy Bard.

6.1 Introduction and Priorities

Chaired by Marc Couture, Director of Sustainability and Energy Management at UTSG, the [Operations Subcommittee](#) brings together students, faculty, and staff to strategically align, prioritize, and advance tri-campus operational objectives and encourage collaboration on sustainability projects with operational and academic activities.

In late 2022, the Subcommittee agreed on the following three priorities for 2023:

1. Tri-Campus Climate Positive Commitments and Action Plans

2. Develop Tri-Campus Sustainability Standards, Procurement, and Sustainable Projects and Operations
3. Improve Tri-Campus Waste Reduction and Diversion rates

Over the course of the year, the Subcommittee has made great strides in addressing these priorities. The Vice-Presidents of all three campuses have committed to tri-campus alignment on achieving climate-positive operations by 2050. Work on the new tri-campus Sustainable Design Standard has been progressing well, with stakeholder consultation expected to start next year, and the [Air Travel Emissions Mitigation Initiative \(ATEMI\)](#) launched in March 2023 (see [Section 6.4](#)). Work has also progressed on the [Social Procurement Pilot](#), which has been approved to proceed with the program rollout University wide.

To address the third priority, a tri-campus Waste Reduction and Recycling Operations Working Group has been established to develop long-term and unified strategies to improve waste reduction efforts. As this work progresses over time, a further goal of the group is to help U of T become a circular, no-waste campus as we continually track progress and adopt more ambitious targets.

Operations Subcommittee Membership

- **Marc Couture** (Chair), Director, Sustainability and Energy Management, Facilities and Services, Operations and Real Estate Partnerships
- **Andrew Arifuzzaman**, Chief Administrative Officer, UTSC
- **Ahmed Azhari**, Acting Executive Director, Managing Director, Operations, Sustainability and Asset Management, Facilities Management and Planning, UTM
- **Deborah Brown**, Chief Administrative Officer, UTM
- **Christine Burke**, Assistant Vice-President, University Planning, Operations and Real Estate Partnerships
- **Chris Choi**, Environmental Science and Environmental Studies, UTSC (undergraduate student)
- **Jan Mahrt-Smith**, Associate Professor and Academic Director, Global Executive MBA, Rotman School of Management
- **Jeffrey Miller**, Director, Facilities Management and Capital Projects, UTSC
- **Karen Shim**, Communications Associate, Vice-Provost, Academic Programs
- **Adam Trotter**, Associate Director, University Planning, Operations and Real Estate Partnerships

6.2 Waste Reduction and Recycling Operations Working Group

The primary purpose of the Waste Reduction and Recycling Operations Working Group is to collaborate, advise, and develop a long-term strategy for waste and recycling operations for all three U of T campuses. Meeting every two months, the Working Group functions at the discretion of the Chair of the CECCS Operations Subcommittee, Marc Couture, and builds on the work that has already been accomplished on each campus in terms of developing strategies for waste and recycling that include both reduction and diversion tactics. Specifically, the Working Group is tasked with:

- Establishing goals related to waste reduction and recycling operations
- Developing metrics and key performance indicators (KPIs) for outcomes and goals
- Continually measuring progress towards outcomes and goals
- Reporting at every Operations Subcommittee meeting on the KPIs, as a standing agenda item

- Communicating outcomes and goals to the U of T community and beyond

Membership includes:

- Director, Sustainability and Energy Management, UTSG (Marc Couture, Chair)
- Director, Facilities Management, UTSC (Jeff Miller)
- Managing Director, Operations, Sustainability and Asset Management, UTM (Ahmed Azhari)
- Waste Management Supervisor, UTSG (Nabil Yacoub)
- Senior Manager, Caretaking and Waste Management, UTM (Kuldeep Gangireddy)
- Senior Manager, Grounds and Caretaking, UTSC (Diego Lupallier)
- Senior Manager, Sustainability Office, UTSG (Scott Hendershot)
- Project Manager, Sustainability Office, UTSG (Chelsea Dalton)
- Senior Manager, Sustainability and Energy Management, UTM (Beverley Ayeni)
- Manager, Sustainability, UTSC (Patricia Escobar)
- CECCS Project Manager (Dione Dias)

So far, the Working Group has identified and initiated a process of standardized waste audits across the three campuses to ensure we are measuring the same things. Previously, methods for these audits have differed. For example, UTSC didn't previously include construction waste, scrap metal, e-waste, yard waste, cooking oils, or toner and textbook recycling as part of their waste diversion rates. As a result, their actual diversion rate is likely much higher than the reported 6.46% from their most recent waste audit that only included tri-sorter receptacles. If other recycled materials were included, their diversion rate would have been around 45%.

The first tri-campus waste audit will take place in late 2023 and was partially informed by the Cambium waste consultant hired by the St. George Sustainability Office. The tri-campus audit also involved ENV1103 students as part of a Campus as a Living Lab project assessing and evaluating multi-campus waste audits.

There has also been agreement to adopt KPIs aligned with [The Sustainability, Tracking, Assessment & Rating System \(STARS\)](#), and work has progressed on establishing tri-campus Standard Operating Procedures that recognize the unique context of each campus.



Members of the U of T Trash Team work to increase waste literacy and reduce plastic pollution, contributing to campus waste reduction efforts. Photo by Tory Grewar.

6.3 Staff Workshop on the SDGs

We have continued to collaborate with the Equity, Diversity & Inclusion (EDI) portfolio within the Office of the Vice-President, People Strategy, Equity and Culture (PSEC) office to develop a one-hour virtual lunchtime workshop for staff to raise awareness on the SDGs, initiatives U of T is taking to address them, and how staff can get involved. This collaboration has allowed us to strengthen the sections of the workshop linking the SDGs to EDI initiatives such as institutional commitments and [progress on recommendations](#) stemming from the [Anti-Black Racism Task Force](#), [Antisemitism Working Group](#), [Anti-Asian Racism Working Group](#), and the University's [Truth and Reconciliation Commission Steering Committee](#). In addition to working closely with Natalie Elisha, Equity Project Specialist, we have also met with Brianna Sands, Special Projects Officer, Indigenous Initiatives, to finalize the workshop details and logistics to host a pilot workshop as soon as feasible.

6.4 ATEMI Update

Building off of an earlier [CECCS report on air travel related emissions](#), the University's [Air Travel Emissions Mitigation Initiative \(ATEMI\)](#) was launched on March 15, 2023. Carbon fees are now being collected on all unavoidable University-funded air travel, excluding travel funded by external research grants. Rather than purchase third-party offsets, these carbon fees go directly towards funding tri-campus projects to reduce University-related carbon emissions. Below is the framework for mitigating air travel emissions.



- Offset Unavoidable Travel**
- All operationally funded air travel
 - Rates: distance & travel class

- Guiding Principles**
- Address U of T emissions
 - Avoid or capture greenhouse gases (GHGs)
 - No third-party offsets

- Accountability**
- Third-party verifier project review
 - Use lessons learned to inform

- Governance**
- Tri-campus advisory committee

- Transparency**
- Annual program report

The first such mitigation project occurred in May 2023 and involved [planting 2,300 native tree seedlings](#) on 1.5 hectares of land at the Koffler Scientific Reserve in collaboration with the Lake Simcoe Region Conservation Authority and Forests Ontario. Expected to sequester 500 tonnes of carbon dioxide over 50 years, this project will also support academic research, increase biodiversity, and reduce forest fragmentation. See further details on [mitigation project principles](#).



Planting 2,300 native tree seedlings at the Koffler Scientific Reserve in May 2023 as part of the first ATEMI-funded carbon offset initiative. Photo courtesy of the Sustainability Office.

The UTSG Sustainability Office partnered with the Information and Technology Services (ITS) and the Financial Advisory Services and Training (FAST) teams to build a mechanism within existing financial systems and processes to calculate offset fees during the reimbursement period and retroactively charge it to the corresponding departments. Staff from these offices were awarded the [2023 CUCCIO Innovation Award](#) for their hard work launching this important initiative.

ATEMI had a call for project proposals in October open to all staff, faculty, and students across the three campuses. Submissions will be reviewed by the ATEMI advisory group. Proposals will be evaluated based on emissions reductions, cost, realistic implementation plan, and co-benefits. Projects of all sizes will be considered — with a total of \$300,000 available to be shared across projects selected this year. Selected projects will be announced in early 2024.

6.5 Tri-Campus Alignment

The former Tri-Campus Sustainability Board was folded into the Operations Subcommittee in 2021, and staff from the CECCS Secretariat and the tri-campus sustainability offices have been meeting monthly to collaborate on key initiatives and share updates and expertise. Key initiatives include student engagement at Orientation events ([Section 7.7](#)), and Campus as Living Lab projects ([Section 4.8](#)) proposed and overseen by sustainability staff. While sustainability operations at U of T continue to be undertaken at a campus level, increasing collaboration and coordination has also been seen in the areas of sustainability building standards ([Section 6.6](#)), and waste reduction and recycling efforts ([Section 6.2](#)).



From left to right: Scott Hendershot (Senior Manager, Sustainability Office, UTSG), Patricia Escobar (Manager, Sustainability, UTSC), Beverley Ayeni (Senior Manager, Sustainability and Energy Management, UTM) and Kristy Faccor (Director, CECCS). Photo by Samantha Dilorio.

6.6 Sustainable Building Standards

U of T is committed to taking a comprehensive approach towards improving the way we design our buildings — from energy performance through the entire lifecycle of the built environment across our three campuses. In order to achieve this, a tri-campus team comprised of Sustainability Office staff, energy managers, Infrastructure Planning & Implementation staff, EDI staff, and work-study students are working on developing a new, holistic sustainability standard for campus buildings that will apply to new construction as well as major renovations.

The new standard will cover key areas including transportation; location, water; energy; indoor environment; lifecycle impacts; equity, diversity, and inclusion; and health and wellbeing. The standard is currently in draft with a release target in 2024. The standard is being written to exceed the minimum requirements directed by the Ontario Building Code and Toronto Green Standard, utilizing and inspired by more aggressive standards — both internally and externally.

We are doing this to drive towards the University's Climate Positive commitment as well as our other sustainability goals and be an example for others to do the same.

6.7 Climate Positive Plan and Tri-Campus Commitment

This year brought important milestones in the University of Toronto's ambitious Climate Positive Plan. On our downtown campus, construction was completed on the geothermal field and classroom below King's College Circle as part of the Landmark Project, and the much-anticipated green space at the centre of campus restored and expanded to include a new Indigenous learning and healing garden in front of Hart House.

Also, in keeping with our commitment to regenerative sustainability and sector-leading net positive commitment made in 2019, the University of Toronto leadership capped off 2023 with a newly expanded climate positive commitment that will extend all three of its campuses in the Greater Toronto Area. In late 2023, Alexandra Gillespie, Vice-President, and Principal University of Toronto Mississauga, Wisdom Tettey, Vice-President, and Principal, University of Toronto Scarborough, and Ron Saporta, Acting Vice-President, Operations signed the [climate positive tri-campus commitment](#), outlining bold milestones for each campus to collaborate, share best practices, and deliver as part of our institutional commitment to continued innovation and climate action. The tri-campus commitment promises to:

By 2025

- Create and validate comprehensive campus-specific Climate Action Plans with aligned metrics to track progress and reduce absolute carbon emissions by at least 80% before 2050;
- Identify sustainable energy solutions to meet remaining energy needs;
- Looking forward, ensure sustainable campus growth and minimize risks.

By 2030

- Achieve the Low-Carbon Action Plan (LCAP) carbon reduction commitments through avenues such as geexchange for heating and building retrofits;
- Review and if necessary, revise our tri-campus Climate Action Plans, and report on progress.

By 2050

- Achieve climate positive status at all three campuses;
- Create and validate a plan to further reduce GHG emissions to increase the size of the University's carbon sink.

The full commitment letter can be found in [Appendix 5](#).



Before: Construction of Canada's largest urban geothermal exchange. Photo by David Lee.



After: Completion of the public green above the geothermal exchange. Photo by David Lee.

7

Engagement & Partnerships



Jacob Muller testing a student's U of T sustainability knowledge with the SDG Trivia Game he helped create at the UTSG Clubs Day table, September 6, 2023. Photo by Lisa Lightbourn.

7.1 Introduction

The [Engagement & Partnerships \(E&P\) Subcommittee](#) is chaired by Derek Newton, Assistant Vice-President, Innovation, Partnerships and Entrepreneurship at the Innovations & Partnerships Office (IPO). This year, we have seen exciting developments with the pilot of our Summer Sustainability Internship Program, whereby U of T students were hired by local community partners to help address their sustainability challenges ([Section 7.2](#)), and with progress on the international Network of Climate Networks ([Section 7.4](#)).

Early in 2023, the Subcommittee received a fulsome report on this year's Adams Sustainability Celebration, and recommendations for how we might continue internal engagement activities now that funding for the three-year Celebration has ended.

The CECCS Secretariat also once again participated in tri-campus Clubs Day and Orientation activities in September in collaboration with the Sustainability Offices to raise student awareness of our work, and especially, promote our Sustainability Pathways Program ([Section 7.7](#)).

Engagement & Partnership Subcommittee Membership

- **Derek Newton** (Chair), Assistant Vice-President, Innovation, Partnerships and Entrepreneurship
- **Basil Abu Sara**, BAsc, Engineering Science (undergraduate student representative)
- **Matthew Adams**, Associate Professor, Department of Geography, Geomatics and Environment, UTM
- **Andrew Arifuzzaman**, Chief Administrative Officer, UTSC
- **Gwen Burrows**, Assistant Vice President, International Engagement and Impact
- **Karen Chapple**, Director, School of Cities
- **Simona Chiose**, Divisional Lead, Public Affairs, Government Relations Office
- **Lisa DeMarco**, Senior Partner and CEO, Resilient LLP (alumna representative)
- **Wilfred de Vega**, Senior Advisor, Mitacs (external representative)
- **Steve Easterbrook**, Professor and Director, School of Environment
- **Jennifer Esmail**, Director, Centre for Community Partnerships
- **Amanda Harvey-Sánchez**, PhD Candidate, Anthropology (graduate student representative)
- **Shashi Kant**, Director, Master of Science in Sustainability Management (MScSM); Professor, Institute for Management and Innovation, UTM
- **Karen Shim**, Communications Associate, Vice-Provost, Academic Programs
- **Shannon Simpson**, Director, Indigenous Initiatives
- **Colin Swift**, Business Development Officer, Industry Partnerships, Innovation and Partnerships Office
- **Ivette Vera-Perez**, President and CEO, Canadian Hydrogen and Fuel Cell Association (external representative)



Engagement & Partnerships Subcommittee Chair Derek Newton with Kristy Bard, CECCS project manager supporting the E&P Subcommittee. Photo by Tory Grewar.

7.2 Sustainability Summer Internship Program

Building upon the strong foundation of the Adams Sustainability Champion Internships in the past, this summer we piloted full-time summer internships with partner organizations tackling sustainability challenges and opportunities in the region and globally. The partners, projects, and sustainability interns for our pilot year are as follows:

- Unity Health, Net Zero Healthcare. Sustainability Intern: Indraneel Bhattacharjee
- City of Toronto, PollinateTO Grants, Eco-Roof Incentive Program, Equity Indicators, Net Zero City. Sustainability Interns: Jolene Ung and Shireen Kang
- Toronto Environmental Alliance, Zero-Waste Circular Alternatives. Sustainability Intern: Mai-Yin Johnston
- Toronto Community Benefits Network, Equitable and Sustainable Neighbourhood Planning. Sustainability Intern: Tisya Raina
- CECCS co-convened Network of Networks with the University of Cambridge, University Network Climate Action. Sustainability Intern: Yazan Zamel

These five partners provided six student interns with valuable work experience and helped local organizations tackle sustainability challenges such as waste reduction, climate mitigation and adaptation, community engagement, and global collaboration on climate.

As part of our pilot year, \$75,000 was disbursed to community partners to hire five U of T students as full-time interns over the summer of 2023. At Unity Health, a Sustainability Project Intern assisted in the strategic development and implementation of projects to help the organization achieve net-zero healthcare. The Toronto Environmental Alliance hired a Waste Projects Specialist to support work to help shift Toronto from single-use plastics and disposable foodware towards zero-waste circular reusable alternatives. Another intern supported the Toronto Community Benefits Network's community engagement activities to develop neighbourhood strategies for inclusive development and environmental sustainability. Meanwhile at the City of Toronto, two research trainees worked on projects involving PollinateTO Grants, the Eco-Roof Incentive Program, Equity Indicators, and the Economic Transition to a Net Zero City.

Lastly, one of the summer interns worked with CECCS on the U of T and University of Cambridge co-chaired Network of Networks (NoN). The NoN provides a forum for representatives from international higher education climate networks, enabling greater communication, coordination, and collaboration towards enhanced university-led and supported climate action aligned with the Paris Agreement. Working in close collaboration with a Cambridge Zero co-intern at the University of Cambridge, this intern conducted research and synthesized information to help plan and coordinate higher education network opportunities in climate action, activities at COP28, longer-term partnerships with the United Nations, and better map, characterize, and understand the increasingly populated landscape of climate-related networks in the higher education sector.

These six full-time summer internships provided U of T students with meaningful work experience that will prepare them for careers in the sustainability field, while at the same time helping our community partners achieve their sustainability goals. The Toronto Environmental Alliance was so impressed with the work of their U of T summer intern that they extended her on a part-time basis to the end of December (with funding from another source) to assist with analysis and reporting of the information and study she

supported over the summer. We will evaluate this pilot program with an eye to improving it for next year, to create even more opportunities for our students and fellow sustainability champions in the region.



Indraneel Bhattacharjee

Unity Health Sustainability Intern

“This enriching experience has equipped me with valuable skills and knowledge that I am eager to apply in my future career, contributing to a greener and more sustainable world.”



Mai-Yin Johnston

Toronto Environmental Alliance Waste Projects Specialist

“The internship allowed me to see some of what I have learned in school in practice. I was hoping to gain experience bringing theory from academia to reality in our communities and the world, and this internship allowed me to do precisely that.”



Jolene Ung

City of Toronto Environment and Climate Division Research Trainee

“This program gives students who are passionate about sustainability an opportunity to develop the skills they need to work in the sector in the future and become tomorrow’s environmental leaders and changemakers.”



Shireen Kang

Research Trainee, City of Toronto Environment and Climate Division

“There is no better opportunity than this. The CECCS Internship Program was an invaluable opportunity where I was able to use my skills and knowledge while receiving expert guidance and support... it was the most practical and relevant form of experience a student could gain.”



Tisya Raina

Toronto Community Benefits Network Sustainability Intern

“The internship at TCBN was an immensely valuable opportunity that provided me with practical experience, skill development, and a deeper understanding of sustainability challenges in real-world contexts.”



Yazan Zamel

U of T Climate Networks Sustainability Intern

“Overall, this experience has greatly improved my research, communication, networking, and professionalism and I am delighted to have had the opportunity to participate in it. This internship has been very valuable to me, as it gave me a chance to call for climate action in a new, innovative way.”

7.3 University Networks

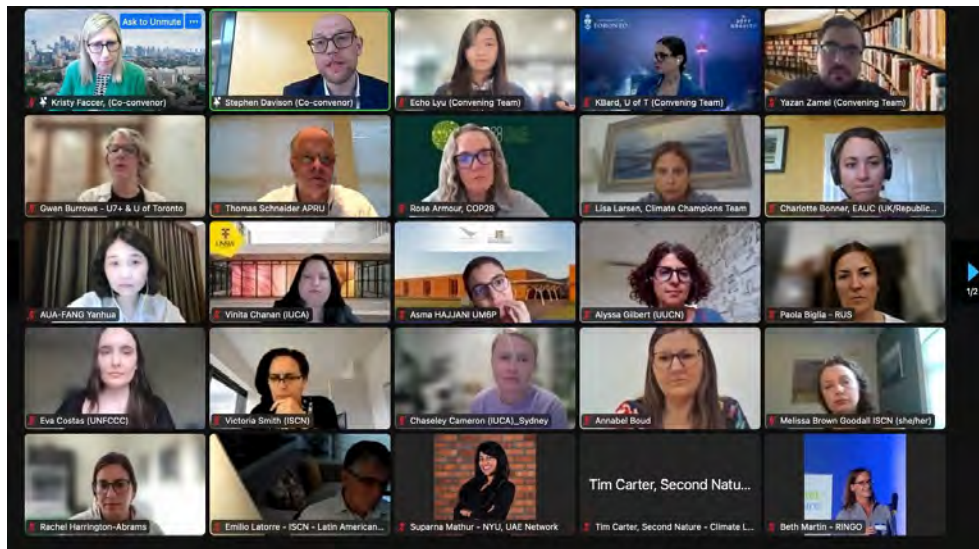
U of T is actively involved in the governance of the university networks to which it belongs, serving as part of the Steering Committee of the [University Climate Change Coalition \(UC3\)](#), Advisory Committee of the [International Sustainable Campus Network \(ISCN\)](#) and as Chair of the Presidential Steering Committee of the [World Alliance of Universities \(U7+\)](#). At UC3, CECCS Co-Chair John Robinson also leads a transdisciplinary co-production working group and at ISCN, CECCS Director Kristy Facer is a Senior Fellow and co-lead for a working group on global engagement with Melissa Goodall-Brown at Yale University

7.4 Network of Climate Networks (NoN)

The opportunity to develop a higher education climate network of networks (NoN) was identified [at a 2022 meeting](#) convened by COP26 President Alok Sharma in partnership with the [UK Universities Climate Network \(UUCN\)](#), the [International Sustainable Campus Network \(ISCN\)](#) and others. During that dialogue, CECCS Co-Chair John Robinson presented the idea of a NoN to connect the Higher Education Institution (HEI) sector in the way that local governments and private sectors have done to accelerate impact on climate action at a global scale.

Since the first convening, CECCS Director Kristy Facer and Steve Davison, Director of Strategy for Cambridge Zero at the University of Cambridge and UUCN member, have co-convened the NoN through community building and consultation, and helped to advance key priorities outlined by network leads. These include providing regular opportunities for information sharing among the networks, mapping the network landscape, and facilitating connections to key global climate action partners such as the Climate Champions team.

With help from the two summer interns, Kristy and Steve co-convened a [July 25 Network of Climate Network meeting](#) attended by 24 network leaders from around the world, distributed a survey to over 60 higher education networks, and conducted interviews with 16 network representatives. Through the survey and interviews, we solicited network case studies on nature-based solutions and climate finance given priorities identified by the COP28 Climate Champions Team. Additional literature was also reviewed to identify case studies which illustrated relevant contributions by higher education institutions and networks to key climate action priorities.



Network of Network meeting co-convened by the University of Toronto (Kristy Faccor) and the University of Cambridge (Stephen Davison) on July 25, 2023. Screenshot by Echo Lyu.

7.5 COP in Dubai

Universities are one of the larger groups represented at the annual United Nations climate change conference. These groups have long been involved in research activities related to the proceedings and priorities of the state party negotiations taking place. Increasingly, however, these groups are interested in achieving a more coordinated contribution and presence at these events and more generally on global climate action. At this year's Education Day at COP28, the Network of Networks is hosting an agenda-setting roundtable with network leaders and co-hosting an evening gathering for higher education leaders and VIPs in the green zone. CECCS is also partnering with the U of T Climate Positive Energy (CPE) Institutional Strategic Initiative (ISI) on supporting a higher education pavilion together with 12 other universities in the US and Europe, and on an official side event on university innovation and engagement for climate action.



Delegates at the People's Plenary at COP26. Photo by NurPhoto/Getty.

7.6 Sustainable Buildings Canada: Better Buildings Boot Camp

This year's [Better Buildings Boot Camp](#) (BBBC) ran from June 19-23, 2023. Now in its fourth year, the program is an excellent opportunity for diploma and graduate students from across disciplines and institutions to collaborate with faculty, staff, and professionals through the integrated design and delivery process to develop more sustainable buildings. The focus this year was on deep energy retrofits for 320 Assiniboine, a 19-story York University building housing approximately 230 graduate students and their families, with the goal of achieving net-positive environmental and human outcomes. [Professor Marianne Touchie](#) of the U of T Department of Mechanical and Industrial Engineering and Director of the [Building Energy and Indoor Environment Lab](#), was one of 30 subject matter experts who spoke at this year's Boot Camp. The event featured 17 live interactive plenary sessions facilitated by a group of leading academic experts and industry professionals.

Twenty-seven students from 10 institutions participated, including four students from U of T. Of these, the following two U of T students received \$1,000 White Paper awards for presenting their areas of expertise at the end of the week and for connecting it to what they learned at BBBC. Congratulations to:

1. Mayank Kumar, U of T, "Powering the Future Buildings: Unleashing the Potential of Predictive Energy Management with Artificial Intelligence and Machine Learning"
- and
2. Guillaume Baggio, U of T, "Low-Income Energy Retrofit Programs Targeting Wellbeing and Living Experiences"

CECCS Co-Chair John Robinson serves on the academic advisory panel that provides support and advice for this annual Boot Camp.

7.7 Student Orientation

This year the CECCS Secretariat once again partnered with the Sustainability Offices to participate in Clubs Day events on all three campuses. We had a lot of fun featuring the SDG Trivia Game at our UTM and St. George tables, created by John H. Daniels Faculty of Architecture, Landscape, and Design students Dorottya Kiss, Hashem Hashem, Jacob Muller, and Orly Sacke after receiving our Adams Sustainability Grant in the spring. Both Dorottya and Jacob were on hand challenging students with their trivia questions related to the SDGs and sustainability at U of T. At UTSC, we helped promote the Sustainability Office's new [Waste Ambassador Program](#) and tested students on their waste sorting knowledge.



Nadine Leone (Coordinator, Student Life & Sustainability Programs) testing a student's waste sorting knowledge and promoting the Waste Ambassador Program at UTSC Clubs Day, September 20, 2023. Photo by Kristy Bard.

As part of our Orientation engagement initiatives, we created a QR code linking to our [Orientation website](#) listing ways students can become Sustainable Change Agents by engaging with CECCS initiatives. We encouraged students to keep in touch by following us on Instagram and subscribing to our monthly newsletter. As an added incentive, all new student subscribers to our newsletter throughout September were automatically entered for a chance to win a 64GB iPad Air. Congratulations to the winner, first-year UTM Psychology student Gabriella Di Maio, and welcome to all 102 of our new student subscribers! We also partnered with the Sustainability Office on an Instagram prize giveaway the week of September 11, resulting in 177 new followers on our Instagram account. Special thanks to all the CECCS and Sustainability Office staff and work-study students who helped make these engagements such a success.

Another component of our Orientation activities was our involvement in the School of Environment's [Certificate in Sustainability Open House](#) on September 13. The Open House invited students to learn more about the Faculty of Arts and Science Sustainability Scholar program. Presenters provided details about the program, such as how and why students should enrol, and previous graduates of the program discussed how the Certificate expanded their understanding of sustainability and added value to their academic experience at U of T. CECCS representatives presented on the [Sustainability Citizen](#) component of our Pathways Program. The event was attended by 39 students, many of whom were first year.

Pictured: Students pledging to be Sustainable Change Agents at UTM Clubs Day, September 5, 2023. Photo courtesy of CECCS Work-Study Student Lu Xi (right).



7.8 Student Group Inventory

The student group inventory is a great resource for those looking to engage with clubs on campus that share their interests, and to earn credit towards our [Sustainability Citizen Program](#). The 2022-23

Sustainability Student Group Inventory was updated in late 2022 and included 269 student groups across the University's three campuses and affiliated colleges that focus on topics related to the UN SDGs. This represented 29% of all 930 student groups that existed when that inventory was completed.

The [2023-24 Sustainability Student Group Inventory](#) was completed in November 2023, and includes 223 sustainability student groups out of a total of 812 (27%). This drop is due to a backlog in student group renewals waiting to be approved by the Student Organization Portal, through which we identify groups for inclusion. We will continue updating this year's Sustainability Student Group Inventory as we become aware of new additions.



Student activists from Climate Justice U of T (left) and the Accessibility Awareness Club (right) promoting their sustainable student clubs at the March 3, 2023 Adams Sustainability Celebration Award Ceremony. Photos by Tory Grewar.

Appendices

Appendix 1 — CECCS Meetings 2022-2023

Committee on the Environment, Climate Change, and Sustainability Meetings

- February 6, 2023
- May 11, 2023
- December 12, 2023

Teaching and Learning Subcommittee

- December 8, 2022
- January 13, 2023
- June 2, 2023

Research Subcommittee

- December 12, 2022
- February 24, 2023
- May 3, 2023

Operations Subcommittee

- December 6, 2022
- February 15, 2023
- June 8, 2023
- October 19, 2023

Engagement and Partnerships Subcommittee

- December 5, 2022
- March 31, 2023

Appendix 2 — University of Toronto Communications Report

UNIVERSITY OF TORONTO COMMUNICATIONS: ENVIRONMENT, CLIMATE CHANGE AND SUSTAINABILITY COMMUNICATIONS REPORT

INTRODUCTION

In 2023, in partnership with the President’s Advisory Committee on the Environment, Climate Change and Sustainability (CECCS), and in consultation with divisional and stakeholder partners across the tri-campuses, University of Toronto Communications (UTC) developed a communications strategy framework to support the creation and enhancement of a sustainability identity at U of T. Rooted in the framework’s strategic communications objective to “raise the profile, expand the outreach and highlight the impact of the University of Toronto as a leader in sustainability,” UTC developed and implemented a series of integrated communications to showcase and promote high-profile environment, climate change, and sustainability initiatives in the key areas of teaching and learning, knowledge partnerships, and operations initiatives at the University of Toronto.

OWNED MEDIA

U of T News

During this period, U of T News published **63 stories** (see *Appendix A*), generating a total of **49,966 page views**¹, on a number of environmental, climate change and sustainability topics. Of these, **18 stories** profiled the University’s institutional initiatives relating to research and innovation, academic programs, operations, and community engagement, increasing awareness among target audiences.

The most popular institutional stories were:

- [U of T institutional strategic initiative focuses on UN sustainable development goals](#)
- [U of T plans on-campus efforts to offset flight emissions](#)
- [‘Making an impact’: U of T to scale sustainability efforts in 2023](#)

Social Media and Video

In Spring 2023, UTC produced and launched “Sustainable Future: Challenge Accepted!” — an integrated tri-campus video series that highlighted how researchers, students, and community partners are making an impact to advance sustainability goals at local, national, and global levels. Over **43 posts**, the 5-episode series, which included supplementary social media content, garnered a cross-channel total of over **983K views**, **1.1 million impressions**, and **15K engagements**, generating an **overall engagement rate of**

¹ Due to Google’s switch to Google Analytics 4 (GA4) in July 2023, unique page views are no longer available on the updated platform. In its place, UTC will report on page views to measure the total amount of times a page was visited. UTC is in the process of establishing a new baseline to gauge a story’s performance, which will act as a benchmark in future reporting.

2.6%² among target audiences (see *Appendix B*). UTC employed a successful paid campaign on Meta social media channels which resulted in high viewership on Facebook.

Top post per social media channel (by engagement):

- **Facebook**
[Profile: Charlotte Wargniez](#)
- **Twitter**
[Episode 3: Green Tech & AI](#)
- **Instagram**
[Episode 3: Green Tech & AI](#)
- **TikTok**
[Profile: Charlotte Wargniez](#)
- **LinkedIn:**
[Episode 2: Climate Resilience](#)

EARNED MEDIA

UTC’s targeted efforts generated strategic external coverage in top-tier international, national, and local media outlets that further elevated awareness of U of T as a global leader in sustainability research, education, and operations. The media relations team also provided strategic guidance, issues briefs, and corrected inaccuracies in related earned media coverage.

The most impactful earned media results often come when the University is shown to be an exemplar, as it is in [this University Affairs report](#) on how post-secondary universities are overhauling operations to reduce greenhouse gas emissions, and in coverage of sustainability ranking in international outlets such as [The Guardian](#), [Taipei Times](#), and [India Today](#) as well as local guides [BlogTO](#), [Narcity](#), [Curiosity](#), [MTL Blog](#), [Daily Hive](#), and [Slice](#).

Goal	Results
<p>Leverage sustainability stories to amplify and reinforce key message among target audiences via strategic earned media coverage that achieves an average quality score³ of 8 or above</p>	<p>Average quality score of 8.6 reaching target audiences, including coverage in The Guardian, CBC, and University Affairs (see <i>Appendix C</i>)</p>

² This is comparable to UTC’s average overall engagement rate for 2022-2023 (3.3%).

³ The quality score analysis is a rating of the quality and relevance of the earned media coverage generated to reach target audiences with established key messages (see Appendix C for the scoring key).

APPENDIX A: U OF T NEWS STORIES

2022

- 11/07/2022, [UTAM achieves divestment pledge, sets more ambitious carbon footprint reduction target for endowment](#) (676 page views)*
- 11/15/2022, [Living Cities: U of T researchers develop framework for green infrastructure](#) (513 page views)
- 11/23/2022, ['I want to make room for people': Pilot program aims to level the playing field in field research](#) (547 page views)
- 11/23/2022, [Sophisticated genomics could give food crops an edge in the arms race against pathogens](#) (123 page views)
- 11/23/2022, [U of T researcher to lead \\$10-million project to study wetlands' role in combating climate change](#) (511 page views)
- 12/01/2022, [U of T President Meric Gertler calls for cross-sector collaboration at Climate Economy Summit](#) (597 page views)*
- 12/02/2022, [Researchers explore strategies to 'bury' CO2 in concrete buildings](#) (835 page views)
- 12/08/2022, [Non-native bees discovered in Canada may pose serious threat to native mason bee populations](#) (568 page views)
- 12/13/2022, [Intensive agriculture turned a wild plant into a pervasive weed, study finds](#) (325 page views)
- 12/15/2022, [Startups Erthos and Genecis on meeting the challenge of the single-use plastic ban: Toronto Star](#) (319 page views)
- 12/16/2022, [Using quantum-inspired computing, U of T Engineering and Fujitsu discover improved catalyst for clean hydrogen](#) (740 page views)
- 12/19/2022, [This made-in-Ontario collaboration is creating next-generation parts for electric vehicles](#) (520 page views)
- 12/20/2022, [Inspired by her First Nations heritage and love of nature, PhD student researches salmon conservation](#) (889 page views)

*Story profiled a U of T-led initiative

2023

- 01/02/2023, [Most species evolve by adapting to similar, large-scale environmental pressures, study finds](#) (815 page views)
- 01/02/2023, [U of T extends Scott Mabury's term as vice-president, operations and real estate partnerships, and vice-provost, academic operations](#) (827 page views)*
- 01/03/2023, [How do people use public parks? Researchers study cellphone data to understand green space use](#) (733 page views)
- 01/19/2023, [Build more, pollute less: U of T research centre tackles need for sustainable infrastructure](#) (1,059 page views)
- 01/30/2023, [Researchers develop coating that prevents synthetic fabrics from shedding harmful microplastics in the wash](#) (2,534 page views)
- 01/31/2023, ['Liquid windows' inspired by squid skin could help buildings save energy](#) (1,272 page views)
- 02/08/2023, ['Making an impact': U of T to scale sustainability efforts in 2023](#) (1,919 page views)*
- 02/09/2023, [U of T Trash Team finds masses of plastic, 'fatbergs' and other waste in Toronto's harbour: Toronto Star](#) (261 page views)
- 02/15/2023, [U of T researchers help design the future of nuclear waste management](#) (205 page views)
- 02/22/2023, [U of T plans on-campus efforts to offset flight emissions](#) (2,055 page views)*
- 02/23/2023, [Researchers enhance durability of low-cost solar cells made from nano-sized crystals](#) (276 page views)
- 02/24/2023, [U of T entrepreneurs credit Adams Sustainability Innovation Prize for energizing sun-care startup](#) (425 page views)*
- 02/28/2023, [U of T Faculty of Law event focuses on law and policy amid climate change](#) (584 page views)
- 03/03/2023, [U of T's Climate Positive Energy initiative to partner with City of Toronto on youth-led leadership in climate action](#) (270 page views)*
- 03/06/2023, [U of T startup Genecis scales up effort to commercialize 'the holy grail of plastic replacement'](#) (1,162 page views)
- 03/07/2023, [The future of takeout? U of T startup partners with restaurants to offer reusable containers](#) (493 page views)*
- 03/08/2023, [U of T grad student tracks 70 years of snow and ice data in the High Arctic](#) (185 page views)

- 03/08/2023, [Startup trains women in rural Costa Rica, 'upcycles' airline seats into leather goods](#) (459 page views)
- 03/09/2023, [U of T partners with Vale Energy Transition Metals to accelerate sustainable mining solutions](#) (241 page views)*
- 03/16/2023, [Researcher's startup receives federal support to make solar-energy-control windows](#) (415 page views)
- 03/20/2023, [By studying lizards, researchers reveal the forces that shape biodiversity](#) (265 page views)
- 03/28/2023, [High levels of 'forever chemicals' found in paper takeout containers: Study](#) (7,077 page views)
- 03/29/2023, ['Too comfortable in our own comfort': U of T expert on why we shouldn't waste water](#) (421 page views)
- 04/12/2023, [U of T researchers create more efficient perovskite solar cell](#) (290 page views)
- 04/19/2023, [U of T researchers use solar-powered tech to improve rainwater harvesting in Mexico](#) (184 page views)
- 04/20/2023, [Sustainable Future — Challenge Accepted! Changemakers Ep. 1](#) (1,037 page views)*
- 04/20/2023, [U of T researchers grow micro-organisms that can clean tailings ponds and recover nickel](#) (284 page views)
- 04/25/2023, [U of T-led collaboration to develop community-tailored clean energy technologies](#) (985 page views)*
- 05/02/2023, [Researchers find high levels of banned toxic chemicals in toys and headphones](#) (560 page views)
- 05/04/2023, [Sustainable Future — Challenge Accepted! Climate Resilience Ep. 2](#) (673 page views)*
- 05/05/2023, [New catalyst could increase the value of captured carbon by transforming it into acetic acid: Study](#) (296 page views)
- 05/09/2023, [The Dungeness crab is losing its sense of smell, putting it at risk — and climate change may be to blame](#) (420 page views)
- 05/18/2023, [Sustainable Future — Challenge Accepted! Green Tech & AI Ep. 3](#) (515 page views)*
- 05/24/2023, [U of T Scarborough collaborates with local community centre on culturally relevant food security](#) (407 page views)*

- 05/24/2023, [Researcher develops sustainable solution for removing phosphate and ammonium from wastewater](#) (598 page views)
- 05/29/2023, [Can AI help make our buildings more sustainable?](#) (1,002 page views)
- 06/01/2023, [Sustainable Future — Challenge Accepted! Climate Justice Ep. 4](#) (699 page views)*
- 06/12/2023, [Sustainable Future — Challenge Accepted! Equitable Communities Ep. 5](#) (675 page views)*
- 07/05/2023, [Researchers help youth get involved with Toronto's net-zero carbon plan](#) (1,131 page views)*
- 07/07/2023, [New research underscores need to protect 'oasis of the Arctic'](#) (658 page views)
- 07/20/2023, [Improved stability could help perovskite solar cells compete with silicon](#) (417 page views)
- 07/24/2023, [Magazine uses fiction to explore the toll taken by climate change — and our response](#) (563 page views)
- 07/27/2023, [U of T institutional strategic initiative focuses on UN sustainable development goals](#) (2,172 page views)*
- 08/01/2023, [New research institutes at U of T Scarborough will tackle important global challenges](#) (1,194 page views)*
- 08/09/2023, [New photoreactor technology could pave the way to a carbon-neutral future, researchers say](#) (993 page views)
- 08/10/2023, [Electrochemical process could boost efficiency of capturing carbon directly from air](#) (549 page views)
- 08/30/2023, [U of T undergrad student takes the fight against climate change to the streets](#) (428 page views)
- 09/14/2023, [U of T marine biologist dives deep in pursuit of ocean conservation data](#) (539 page views)
- 10/04/2023, [U of T prof leads global collaboration to advance net-zero hydrogen economy](#) (919 page views)
- 10/20/2023, [We should believe what climate models are telling us: U of T computer scientist](#) (662 page views)

*Story profiled a U of T-led initiative

APPENDIX B: SOCIAL MEDIA

Summary of “Sustainable Future — Challenge Accepted!” video series

	# Posts	People Reached	Impressions	Engagements	Engagement Rate	Video Views	URL Clicks	Top Performing Post (by Engagement)
Facebook	8	600,625	693,984	582	0.08%	532,677	281,512	Profile: Meet Charlotte Wargniez
Twitter @uoft	8	30,307	43,295	720	1.66%	43,748	153	Episode 3: Green Tech & AI
Twitter @uoftnews	7	7,452	10,646	153	1.44%	10,612	5	Profile: Meet Charlotte Wargniez
Instagram	8	251,301	251,301	12,341	4.91%	352,994		Episode 3: Green Tech & AI
Instagram Stories	5	46,014	46,014	22	3.61%	N/A		Ep. 1.5: The Ocean's Rising. Do you Give a Sh*t (link unavailable)
TikTok	3	12,612	12,612	191	2.30%	12,612		Profile: Meet Charlotte Wargniez
LinkedIn	4	108,465	108,465	1,117	4.00%	30,596	510	Episode 2: Climate Resilience
TOTAL	43	805,475	1,166,317	15,126	2.57%	983,239	282,180	
*Overall Engagement Rate calculated as engagements/ impressions x 100								
*Twitter Reach calculated manually as 70% of Impressions								
*TikTok Impressions = Media Views								
Social	Total							
Total number of social media posts (across Facebook, Twitter, Instagram, TikTok, etc.)	43							
Total social impressions (organic and paid)	1,166,317							
Total social media reach (organic and paid)	805,475							
Overall social engagement rate	2.57%							

APPENDIX C: EARNED MEDIA COVERAGE

Quality Score Analysis			
Desirable Criteria	Score	Undesirable Criteria	Score
Conveys key message	4	No key message	-1
Desirable spokesperson quoted or paraphrased	1	Critic quoted or paraphrased	-2
Desirable visual	1	Undesirable visual	-2
Leaves audience more likely to support the initiative	2	Leaves audiences less likely to support goal	-3
Dispels a myth	1	Negative message or myth reinforced	-2
Display copy contains key message and U of T mention	1	N/A	
Total	10	Total	-10

Quality scores for pitched hits reaching target audiences

Key Message: As a global leader in sustainability research and education, U of T plays a vital role in providing solutions to tackle climate change, and pathways for learning to inspire the next generation of leaders in sustainability.														
Target outlets	Date	Outlet	Topic	Total	Key message		Spokesperson mention +1	Visuals		Support for goal		Myths		Display copy
			Average	8.6	Conveys key message +4	No key message -1		Desirable +1	Un-desirable -2	Increase +2	Decrease -3	Dispels +1	Reinforces -2	Contains U of T mention and key message +1
1 top-tier major print/digital	Oct. 26, 2022	Guardian	Sustainability ranking	7	4					2		1		
1 top-tier broadcast	Sept. 18, 2022	CBC: Here & Now*	Sustainable food services	8	4		1	N/A	N/A	2		1		N/A
1/5 mid-market or specialized	Sept. 5, 2023	University Affairs	Climate Positive Campus	8	4		1			2		1		
2/5 mid-market or specialized	Nov. 6, 2022	BlogTO - Instagram	Landmark/geo-exchange	9	4			1		2		1		1
3/5 mid-market or specialized	Sept. 27, 2023	Narcity	Sustainability ranking	9	4			1		2		1		1
4/5 mid-market or specialized	Oct. 27, 2022	BlogTO	Sustainability ranking	9	4			1		2		1		1
5/5 mid-market or specialized	Aug. 25, 2022	National Observer	Sustainable food services	10	4		1	1		2		1		1
* Broadcast link expired														

Appendix 3 — SDG-Related Keywords for undergraduate course inventory

Sustainable Development Goal

Keywords

Goal 1 NO POVERTY

End poverty in all its forms everywhere

poverty, income distribution, wealth distribution, socio economic, socio-economic, socioeconomic, homeless, low-income, low income, affordab*, disparity, welfare, social safety, developing country, vulnerability, precarity, precarious, pro-poor

Goal 2 ZERO HUNGER

End hunger, achieve food security and improved nutrition and promote sustainable agriculture

agricultur*, nutrition, food security, food insecurity, food-secure, food system, child hunger, food justice, food scarcity, food sovereignty, food culture, culinary, malnutrition, agro*, permaculture, indigenous crops, regenerative agriculture, urban agriculture, organic food, biodynamic, food literacy, food education, benefit sharing, access and benefit sharing (ABS), end hunger, food price, zero hunger, food

Goal 3 GOOD HEALTH & WELL-BEING

Ensure healthy lives and promote well-being for all at all ages

well being, wellbeing, well-being, mental health, public health, global health, health care, healthcare, health issues, mental wellness, disabilit*, sexual education, mindfulness, holism, illness, health education, communicable disease, health determinants, vaccine, substance abuse, maternal mortality, family planning, hazardous chemicals, pollution, health equity, neonatal mortality, infant mortality, child health, road traffic accidents, reproductive health, epidemics, universal health coverage, health

Goal 4 QUALITY EDUCATION

Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all

Equitable, pedagogy, knowledge, worldview, learning, knowledges, traditional knowledge, land-based knowledge, place-based knowledge, decolonial*, anticolonial, settler, equitable, equity, anti-racism, racism, anti-oppression, oppression, anti-discriminatory, early childhood development, peace, citizen, sustainability teaching, sustainability education, universal literacy, basic literacy, universal numeracy, Environmental Education, Education for Sustainable Development, Ecojustice Education, Place-based Education, Humane Education, Land-based Learning, Nature-based Education, Climate Change Education, vocational, technical learning, free education, accessible education, Primary education, secondary education, tertiary education, educat*, 'inclusiv*

Goal 5 GENDER EQUALITY

Achieve gender equality and empower all women and girls

gender, women, girl, queer, female, feminis*, non-binary, non binary, sexes, LGBTQ*, patriarchy, transgender, two-spirit, Gender equality, violence against women, trafficking, forced marriage equality

Goal 6 CLEAN WATER & SANITATION

Ensure availability and sustainable management of water and sanitation for all

water, sanita*, contamination, arid, drought, hygien*, sewage
 Water scarcity, remediation, stormwater management, low impact development, green infrastructure, living infrastructure, Water education, Untreated wastewater, water harvesting, desalination, water efficiency, Groundwater depletion, desertification, water filtration, latrines, open defecation, hydrological cycle, water and energy nexus

Goal 7 AFFORDABLE & CLEAN ENERGY

Ensure access to affordable, reliable, sustainable and modern energy for all

energy, renewabl*, wind, solar, geothermal, Hydroelectric, fuel efficient, fuel-efficient, carbon capture, emission*, greenhouse, Biofuel; energy sovereignty, energy security, energy education

Goal 8 DECENT WORK & ECONOMIC GROWTH

Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all

employment, economic growth, sustainable, development, labour, labor, worker, wage, economic empowerment, entrepreneur*, small- and medium-sized enterprises, SMEs, sustainable tourism, youth employment, green job, economic recovery, green growth, sustainable growth

Goal 9 INDUSTRY, INNOVATION & INFRASTRUCTURE

Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation

infrastructure, buildings, capital, invest*, internet, globaliz*, globalis*, industrialization, value chain, affordable credit, industrial diversification

Goal 10 REDUCED INEQUALITIES

Reduce inequality within and among countries

trade, inequality, financial market, taxation, equit*, equalit*, humanitarian, minorit*, refugee, BIPOC, of colour, of color, indigenous, reconciliation, Truth and Reconciliation, underserved, privileged, affordab*, equal access, marginalized, marginalised, impoverished, vulnerable population, social safety, social security, government program, disparity, income, Gini, anti-oppressive, anti-racist, anti-discriminatory, decolonization

Goal 11 SUSTAINABLE CITIES & COMMUNITIES

Make cities and human settlements inclusive, safe, resilient and sustainable

cities*, urban, resilien*, rural, sustainable development, Public Transport*, metro*, housing, Green Infrastructure, Low Impact Development, Climate change adaptation, climate change mitigation, green buildings, affordable housing, walkab*, transit, civic spaces, open spaces,

	<p>accessib*, Indigenous Placemaking, Indigenous Placekeeping</p>
<p>Goal 12 RESPONSIBLE CONSUMPTION & PRODUCTION Ensure sustainable consumption and production patterns</p>	<p>consum*, production, waste, natural resource*, recycl*, industrial ecology, sustainable design, supply chain, outsourc*, offshor*, reuse, decarboniz*,decarbonis*, carbon tax, carbon pricing, Food waste, public procurement, fossil fuel subsidies</p>
<p>Goal 13 CLIMATE ACTION Take urgent action to combat climate change and its impacts</p>	<p>climate, greenhouse gas, global warming, weather, environmental, planet, vegan, vegetarian, anthropogenic, fossil fuel, emissions, carbon dioxide, CO2, carbon-neutral, carbon neutral, net zero, net-zero, methane, sea level, climate change mitigation, climate change adaptation, climate impacts, climate scenarios, climate solutions, climate justice, global climate models, carbon capture, carbon sequestration, low carbon, resilience, anthropocene, climate positive, offsets, carbon trading, carbon markets, UNFCCC, climate finance, loss and damage, Paris Agreement, Kyoto Protocol, Convention of the Parties, environmental racism, environmental justice, eco justice, sacrifice zone, political ecology, toxic waste, ecocide, environmentalism of the poor</p>
<p>Goal 14 LIFE BELOW WATER Conserve and sustainably use the oceans, seas and marine resources for sustainable development</p>	<p>ocean, marine, pollut*, conserv*, fish, natural habitat, species, animal, biodivers*, coral, maritime, ocean literacy, Ecosystem, overfish*, fish stocks, ocean, sustainable use, traditional use</p>
<p>Goal 15 LIFE ON LAND Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss</p>	<p>forest, biodivers*, ecolog*, pollut*, conserv*, land use, natural habitat, species, animal, regeneration, resilience, sustainable and traditional use, land, Ecological restoration, forest conservation, carbon sequestration, carbon capture, soil, erosion, habitat loss, endangered species, Ecosystem, deforestation, reforestation, wildlife, flora and fauna, benefit sharing</p>
<p>Goal 16 PEACE, JUSTICE & STRONG INSTITUTIONS Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels</p>	<p>institut*, governance, peace, social justice, injustice, criminal justice, human rights, democratic rights, voter rights, legal system, social change, corrupt*, nationalism, democra*, authoritarian, indigenous, judic*, ecojustice, indigenous rights, self-determination, Sovereignty, Violence, exploitation, trafficking, torture, rule of law, illicit, organized crime, bribe*, terroris*, prior and informed consent, access and benefit sharing, UNDRIP (United Nations Declaration on Rights of Indigenous Peoples), indigenous rights</p>

Appendix 4 — Co-Chairs and Director Engagements

Faccer, K. Panelist. “Think Local, Act Global: Connecting Academia to Global Sustainability Events and Discussions” at the [International Sustainable Campus Network Annual Conference](#) in Mexico City on June 6, 2023.

Faccer, K and Davison, S. Keynote. The role of universities in multilateral dialogue: influence and science diplomacy” at the Dg2 network conference on the theme “Universities: Tackling the Climate Emergency” on June 16, 2023.

Faccer, K. Keynote. “Sustainable change from the inside out: The case of the University of Toronto” during Ulysees University [Digital Week 2023](#) on June 19, 2023

Faccer K. Panelist. Higher Education and Research in Climate Change Mitigation and Adaptation session at the [2023 Sustainable Research and Innovation Congress](#) in Panama City on June 28, 2023.

Faccer K. and Davison, S. Opening Remarks. [Meeting of the Higher Education Climate Network of Networks \(NoN\)](#) on July 25, 2023.

Faccer K. Moderator. Sustainability Storytelling session at the [2023 Sustainability: Transdisciplinary, Theory, Practice, and Action \(STTPA\) Conference](#) on October 13, 2023.

Robinson, J. “The Committee on the Environment, Climate Change and Sustainability,” Presentation at Visit of German U15 Rectors and Vice-Rectors, University of Toronto, August 30, 2023.

Robinson, J. “The Committee on the Environment, Climate Change and Sustainability,” Presentation at Visit of Susan Crystal, Consul General of the United States, University of Toronto, July 14, 2023.

Robinson, J. “The Committee on the Environment, Climate Change and Sustainability,” Presentation at Visit of French Minister of Higher Education and Research, University of Toronto, April 25, 2023.

Robinson, J. “[Normalizing Sustainability: Beyond Behaviour Change](#),” Sustainability Lecture Series, University of Alberta Sustainability Council, March 15, 2023.

Robinson, J. “Comments on ‘[Governing University Living Labs for Sustainable Development](#)’,” Monash Sustainable Development Institute webinar “Governing University Living Labs for Sustainable development,” Monash University, March 13, 2023.

Robinson, J. “[The President’s Advisory Committee on the Environment, Climate Change and Sustainability](#),” presentation at webinar on The Sustainable Development Goals and the Transformative Role of Universities, Adams Sustainability Celebration event, University of Toronto, January 18, 2023.

Saporta, R. “Climate Positive and Project LEAP,” presentation to City Counsellor Diane Saxe, Toronto, Ontario, January 16, 2023.

Saporta, R. “Climate Positive and Project LEAP,” presentation at International District Energy Association Conference, Dallas, Texas, February 27, 2023.

Saporta, R. "Climate Positive and Project LEAP," presentation to Community Council, Toronto, Ontario, March 7, 2023.

Saporta, R. "Climate Positive and Project LEAP," presentation to City Counsellor Jamaal Myers, Toronto, Ontario, March 28, 2023.

Saporta, R. "Climate Positive and Project LEAP," presentation at Ontario Association of Physical Plant Administrators (OAPPA) Conference, St. Catherines, Ontario, June 1, 2023.

Saporta, R. "Climate Positive and Project LEAP," presentation to US Consul General, Toronto, Ontario, July 14, 2023.

Saporta, R. "Climate Positive and Project LEAP," presentation at Universities Canada Summit, Toronto, Ontario, September 21, 2023.

Saporta, R. "Climate Positive and Project LEAP," presentation at Carbon Neutral Cities Alliance (CNCA), Toronto, Ontario, Sep 28 2023

Saporta, R. "Climate Positive and Project LEAP," presentation at Page (Senior Strategic Communications Leaders) Annual Conference, Toronto, Ontario, October 3, 2023.

Saporta, R. "Climate Positive and Project LEAP," presentation to International Leadership Council, New York City, New York, November 13/14, 2023.

Appendix 5 — Climate Positive Tri-Campus Commitment

A UNIVERSITY OF TORONTO TRI-CAMPUS PLEDGE

The University of Toronto is committed to becoming climate positive.

The University of Toronto is committed to taking decisive action against climate change, one of the most pressing challenges of our time. Climate action is a priority for our students, staff, faculty, and community, and is a strategic commitment of the [Office of the President](#).

In 2021, our St. George campus — the oldest, largest, and most energy-intensive of our three campuses — took a considerable step by launching its plan to [become climate positive by 2050](#). This commitment will involve reducing our absolute scope one and two greenhouse gas (GHG) emissions by at least 80% and using renewables and other strategies to offset more than the remaining balance, to further reduce other emissions in Ontario.

UTM has already pledged to be carbon neutral before 2050 and created a roadmap for implementing various other sustainability initiatives through their [Sustainability Strategic Plan](#). UTSC has also made great strides towards energy efficiency and innovations, as detailed in their [UN SDG Photo Book](#) showcasing 17 different sustainability projects.

To expand the climate positive goal across our entire institution, all three of our campuses pledge to achieve a climate positive operating model by 2050. This is an extension of our [2019 Low-Carbon Action Plan \(LCAP\)](#) commitment to reduce our GHG emissions by 37% relative to 1990 levels by 2030. LCAP and this new climate positive pledge is in the spirit of our [University Climate Change Coalition \(UC3\)](#) commitments, which include climate resilience and just transitions; and our [U7+ commitment under Principle 3](#), recognizing the role of universities to lead by example on our own campuses to address sustainability challenges of climate change, biodiversity, and energy transition.

By signing this letter, all three campuses are committing to a new phase of climate targets for 2050, thereby increasing both the magnitude and scope of many of our existing GHG reduction projects. We pledge to have all our campuses collaborate to become Climate Positive by sharing best practices and delivering on the following milestones:

By 2025...

- Create and validate comprehensive campus-specific Climate Action Plans with aligned metrics to track progress and reduce absolute carbon emissions⁴ by at least 80% before 2050;
- Identify sustainable energy solutions to meet remaining energy needs;
- Looking forward, ensure sustainable campus growth and minimize risks.

By 2030...

- Achieve the LCAP carbon reduction commitments through avenues such as geoexchange for heating and building retrofits;
- Review and if necessary, revise our tri-campus Climate Action Plans and report on progress.

Before 2050...

- Achieve climate positive status at all three campuses;
- Create and validate a plan to further reduce GHG emissions to increase the size of the University's carbon sink.

⁴ Absolute reductions refer to the total quantity of GHG emissions emitted, as opposed to an intensity calculation comparing emissions to a unit of economic output.

The time to act is now, and the University of Toronto is committed to doing our part to address the climate crisis and inspire further and necessary action around the world. We choose to aggressively lead by example and see the benefits — for the University, for our community, and for the global environment.

We urge others to join us in transforming society towards a more prosperous future that is sustainable, healthy, equitable, and inclusive.

Ron Saporta
Vice President
VPOREP

Alexandra Gillespie
Vice President
Principal of UTM

Wisdom Tettey
Vice President
Principal of UTSC

